OCT 8 - 1935

OCTOBER 5, 1935

vol. 99
pt. 2

Railway Age

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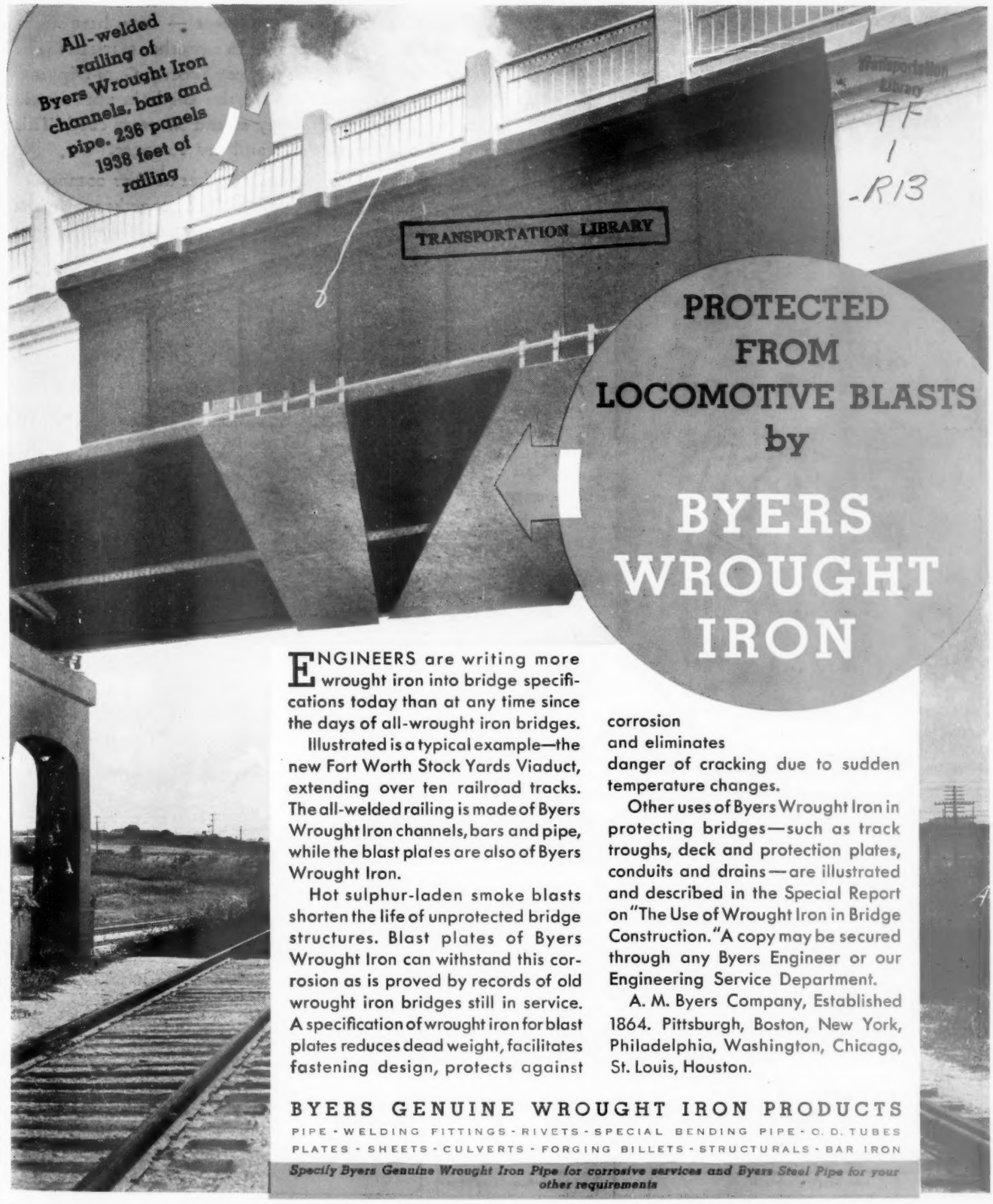
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Published weekly by Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the Act of March 3, 1879.

5140

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office

Published every Saturday by the Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa., with editorial and executive offices: 30 Church Street, New York, N. Y., and 105 West Adams Street, Chicago, Ill.

Vol. 99 October 5, 1935 No. 14

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The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.).

Subscriptions, including 52 regular weekly issues, payable in advance and postage free; United States and possessions, 1 year $6.00, 2 years $10.00; Canada, including duty, 1 year $8.00, 2 years $14.00; foreign countries, 1 year $8.00, 2 years $14.00.

Single copies, 25 cents each.

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RAILWAY AGE

Are the Railroads Doomed by "Evolution"?

Two influential sources of public opinion, with widely different but important audiences, have recently repeated the canard that the railroads' loss of traffic to motor transportation is a step in "evolution;" that, after all, canal boats were supplanted, and railroad decline is preordained for the same basic reason. Too bad for the poor old railroads, the thought seems to be, but we cannot turn back the clock or block the wheels of progress.

Neither of the publications which repeated this opinion, we are certain, did so with any thought of misinforming its readers or of harming the railroad industry. Yet the currency of that opinion can do, and has done, the railroads a great deal of damage. We believe it to be demonstrably unfounded. The argument is plausible. The railroads have been losing traffic to the highway. The motor vehicle is a modern invention. Hence, it is explained, the first is the effect and the latter the cause; the railways are being supplanted by evolutionary progress in transportation, and there is no telling where the process will stop.

The two publications which recently have reuttered this view are the great tabloid newspaper, the New York Daily News, and an investment survey of the railroad industry by the well-known Poor's Publishing Company. Said the Daily News:

> The basic trouble with the railroads, we think, is that they are victims of evolution today, as the stagecoach was in the railroads' youth and prime. It is a question whether they can stave off eventual government ownership, for the preservation of our essential transport system after its profit-making capacity has been ruined by the gasoline engine.

And Poor's said:

> Many adverse forces operating against the railroads are now chronic. They cannot be cured. They may be relieved or partially counteracted, temporarily, but in the long run they will exert an irresistibly depressing influence. The railroads' situation is analogous to that of the canals, which were superseded by the railroads, or the interurban electric railway systems, which were superseded by automobiles and buses. Both fought progress but had to bow to it.

Factors in Railway and Highway Competition

These opinions fail to recognize the fundamental superiority of railroad transportation, which is that a load may be propelled with far less expenditure of energy on steel rails than on even the smoothest of highways. The same gasoline engine which will move a given load on a concrete highway will propel a much heavier load if placed on rails. The difficulties the railroads face in meeting most highway competition are not inherent and fundamental; they are man-made and artificial. Hence they are removable. Since it is obviously untrue that the mechanical efficiency of highway transportation is comparable to that of movement by rail, just what are the factors which are diverting traffic from rail to highway? The principal ones are the following:

1. The entire cost of railroad transportation, plus a large contribution to the general expenses of government, is paid by the users of the railways, whereas the cost of highway transportation is paid in part out of general tax funds, and highway transportation as a whole contributes nothing net toward meeting ordinary governmental expenditures.

2. Railway labor is well paid and its hours are strictly limited, whereas highway transport labor is poorly paid, and, by comparison on the average, overworked. This artificially makes railway costs and rates higher comparatively than they otherwise would be.

3. Loss and damage occasioned by the railways is a charge on the railway companies which they must meet out of their charges to patrons, whereas, in many jurisdictions, irresponsible and uninsured highway users cause loss of life, personal injuries and property damage, the burden of which falls entirely on their victims.

4. Highway transportation is "sold" by the most efficient pricing, service and advertising technique known in modern business, whereas the railways are hampered by policies adopted by themselves, and applied to them by government regulation, when they had a virtual monopoly of transportation.

5. When improved highways, with easier grades and curvature are built, traffic abandons the older roads, upon which movement is slower and more costly, and concentrates itself on the most economical routes. By contrast, round-about, expensive railway lines are continued in operation even when much more economical routes could easily handle all the traffic offered. The result is that the highest efficiency that highway transport can offer comes into competition with railway efficiency of far less than the maximum of which it is capable.

6. Highway transportation, while its line haul expense is higher than that by rail, is direct from point of origin to point of destination and eliminates costly intermediate rehandling. It is also more flexible, without the necessity of waiting for a great bulk of traffic to accumulate before economical movement is possible.

Those six points, we believe, comprehend all the major advantages enjoyed by highway over railway transportation. All of them save the sixth are arti-

ficial, conventional and unreasonable. They can be, and in the interests of society should be, removed. Even the advantage enjoyed by motor transport in the sixth point can be minimized by modern equipment designed to reduce the cost of transfer from rail to highway and vice versa; and railway service might be rendered much more flexible by a modification of working rules which would permit smaller crews and make possible the operation of lighter and more frequent trains.

To examine the above points in somewhat greater detail:

First, with regard to subsidies to highway transport: A brief examination of the facts provides ample evidence that it is not primarily the improvements in the gasoline engine, but rather the billions spent for highways in recent years, which have enabled highway transportation to make such great inroads in railway traffic. Billions are being spent annually for this purpose and most of the money comes, not from users of the highways, but from general taxation. As long as the subsidies continue, who can honestly contend that it is "progress" or "evolution" of the gasoline engine rather than the subsidies which are the principal cause of the diversion of traffic?

"Evolution" Without Subsidies in England

In England, highway transportation is not subsidized. Money for highway construction comes entirely from the "road fund" and the road fund is replenished annually from license fees paid by highway users. (Another good thing about England's policy, in contrast with our own, is that they collect the money before they spend it). The highway users also make a substantial contribution to the general expenses of government, since gasoline taxes (13 cents per U. S. gallon) go into the treasury for the general expenses of government, instead of being diverted to highway purposes, as with us. Presumably "progress" and "evolution" as far as the gasoline engine is concerned have gone as far in England as here. They have the "progress" but not the subsidies—with the result that inroads of highway transportation on railway traffic have not even approached the severity in England that they have here. The British railways are relatively prosperous even today, and their outlook for continued improvement in service to the public and greater prosperity for themselves is brighter than it has been in many years.

Anyone who wishes to ascribe the heavy inroads of motor traffic in this country to progress and evolution rather than to the generosity of the taxpayers will first have to explain away the fact that these inroads in a country where there are no subsidies are relatively unimportant. If there is any defense in the public interest of the policy which has been pursued in this country, it has never come to our attention.

"Taxation" of Oil Companies and Railways

General Baird H. Markham was reported as having inveighed in a recent address in Chicago against excessive taxation as a hindrance to business, and emphasized especially the burden of gasoline and motor vehicle taxes borne by highway users. It is easy to agree with General Markham regarding the adverse influence of heavy taxation in general upon business. Actually, however, the total real taxes directly and indirectly paid by highway users are relatively much smaller than those paid by railway users. The bulk of the so-called taxes collected from highway users is spent upon the highways, and yet is much smaller than the total amount of money spent to provide them with highways. We say "so-called" taxes, because real taxes are collected and spent for the general support of government, and not merely for the specific benefit of those who pay them. On the other hand, the railways completely provide and maintain their highways, and also pay large amounts of real taxes for the support of government, from the revenues derived from their users.

General Markham said, according to a newspaper report, "While average earnings of oil companies amounted to $1.02 a share last year, taxes extracted $5.32 per share." Obviously, he included gasoline taxes in those paid by oil companies, and most of them are spent upon the highways. In 1934 the taxes of the railways, none of which, of course, were spent upon their own highways, amounted to $2.91 per share of stock, and instead of the railroad industry as a whole having any net earnings upon its stock, it had a deficit of 21 cents a share. In the first six months of 1935 its deficit was 75 cents a share. When highway users in this country, like highway users in England and railway users in this country, directly and indirectly pay the entire cost of providing and maintaining the highways they use, and in addition as much real taxes in proportion for the general support of government as the railways and users of their service do, and not until then, will there be as much justification for complaint regarding high taxation of highway users as there is now for complaint regarding high taxation of railway users.

Comparative Costs of Labor and Accidents

Secondly, the low wages and long hours of highway transport labor: Under the motor carrier act recently enacted by Congress the Interstate Commerce Commission has power to regulate the hours of motor carrier workers engaged in interstate commerce. The states have already begun to prescribe limits to these hours. When the pressure of unemployment becomes less acute, it will not be as easy as now to find men willing to do exacting work for low wages.

Thirdly, with respect to compensating for the loss of life and property occasioned by the operation of motor vehicles: The annual toll has become appalling, being estimated at 2½ billion dollars. More and more states are requiring commercial carriers to carry insurance or deposit surety bonds to assure protection of the victims of accidents for which they are responsible. One state requires all drivers to carry liability insurance, and others make this requirement of drivers in-

volved in accidents. The tendency is definitely toward requiring highway users to bear the full cost of damage they cause. When this goal is attained they will have assumed in full another element in the cost of highway transportation which is now borne, in part, by others.

In the fourth place, the superiority of the sales and advertising methods of highway transportation over those so far attained by the railways is a persistent object lesson which the railways will not ignore indefinitely. Indeed, it is obvious to any observer that the railways have already made great strides in overcoming this handicap. There is no reason for assuming that, eventually, the railways will not attain at least equal proficiency with their rivals in this important sphere. The competitive advantage heretofore enjoyed by highway transportation because of freedom from such government regulation of the pricing of its service as has been applied to railway rate-making will be greatly reduced or abolished by the Motor Carrier Regulation Act recently passed by Congress.

Railways Increasing Passenger Business

The railways have done much experimenting with changes in service and rates within recent years for the purpose of determining the best means of recovering traffic that has been lost. Experiments for the purpose of recovering passenger business have been especially numerous and varied. They have included speeding up trains in all parts of the country, extensive air-conditioning of cars and the making of rates in various ways in accordance with territorial and local competitive conditions. The average revenue for carrying a passenger one mile declined steadily from 2.81 cents in 1929 to 1.92 cents in 1934, a reduction of 32 per cent.

That these efforts are bearing fruit is shown by the fact that, although the Century of Progress exposition stimulated passenger business in the summers of 1933 and 1934, passenger earnings were larger in the first seven months of 1935 than in the first seven months of either 1933 or 1934. In these seven months they were $181,000,000 in 1933; $197,400,000 in 1934, and $202,400,000 in 1935. The gain over 1933 was $21,000,000 and over 1934, $5,000,000.

These figures are made especially impressive by comparison with previous declines. Passenger traffic and earnings declined in every year from 1920 to 1929, excepting in 1923. From 1929 to 1933 passenger traffic declined almost 50 per cent and passenger earnings 62 per cent.

Because of the stimulation of travel by the Century of Progress exposition during the summer months of 1933 and 1934, travel by rail was smaller in June and July, 1935, than in 1933 or 1934; but it seems significant that it was larger in the first five months of 1935 than in either 1933 or 1934, and larger in the first six months of the year than in either of those years, or even than in 1932. In the first five months of the year it was 5 per cent larger in 1935 than in 1934 and 27 per cent larger than in 1933. In spite of reductions of rates, passenger earnings in the first five months of the year were about 4½ per cent, or $6,100,000, larger than in 1934, and about 17½ per cent, or $20,000,000, larger than in 1933.

The Century of Progress lasted through June-October, 1933 and 1934, inclusive. The gain in passenger earnings over 1934 in the first five months of the year averaged more than $1,200,000 a month. The decline in June was $492,000 and in July was $608,000. It is an interesting fact, however, that this decline was not general, but occurred entirely in the Eastern and Southern districts. The railways in the Western district actually made gains of $343,500 in June and of $801,000 in July. Among the reasons for this probably are, that, because they serve large populations located nearer Chicago, the eastern and southern lines carried relatively larger numbers of passengers to the Century of Progress exposition than the western lines did, and, that, there being no Century of Progress exposition this year, there has been occurring a larger amount of travel via western lines to national parks and the Pacific coast.

Allowing for temporary influences, the trend of travel by rail has unmistakably reversed its long swing from downward to upward. In the first seven months of the year the increase in passenger earnings accounted for virtually the entire increase in railway gross earnings, the increase in each being about $5,000,000.

Real Advantages of Highways

Fifth, the fact that highway transportation gravitates naturally to the most economical routes, whereas a considerable proportion of railway traffic persists in following circuitous and expensive routes. This is a severe handicap for the railways and one which will not be easily overcome. But it can be overcome, either by pooling or by some degree of consolidation of parallel lines. General recognition of the obstacle to railway competitive vigor entailed by a multiplicity of routes and too much inter-railroad competition is the first step in correcting this condition.

The sixth point, the advantage which the motor carrier has by reason of direct movement from origin to destination, and the greater flexibility and frequency of service possible by movement in small units, we have already discussed in some degree above. This point comprehends all that is fundamental in the "evolution" or "progress" in transportation, as represented by the motor vehicle. That these advantages are genuine and assure the motor vehicle of a large and profitable field of operation no one can deny. But that they are sufficient to enable the motor vehicle to supplant in important measure the railroad as the principal reliance of the country for its major transportation tasks, may well be doubted *unless the artificial and socially unjustifiable advantages with which motor transportation is surrounded are continued and augmented.*

If the railways "go the way of the canal boat," it will be regression and stupidity, not "progress" and "evolution," which bring it about.

Illinois Central Rebuilds 4,000 ft. of Viaduct

Approaches of Ohio River bridge at Cairo, Ill., were replaced after 45 years' service—Many interesting problems were involved

LIMITED load-carrying capacity and the deteriorated condition of spans that had seen 45 years service have brought about the replacement of the approaches to the Illinois Central's Ohio River bridge at Cairo, Ill., comprising a total of 4,000 ft. of single-track steel structure. This project, which was completed late this spring, was the largest of three major improvements made by this road with funds secured through loans from the federal Public Works Administration, and represented an outlay of $870,000. Although it involved the erection of 4,588 tons of structural steel, the placing of 5,700 cu. yd. of concrete, and 15,000 cu. yd. of grading in the south approach embankment, all work was done by company forces, augmented by local labor recruited through federal employment agencies, as the terms under which the loan was granted prohibited contract work.

The importance of the Cairo bridge to the Illinois Central is indicated by the fact that for 39 years following its completion in 1889, it comprised the only crossing of the Ohio river connecting its northern and southern lines. Since the completion of the Edgewood cutoff in 1928, the bridge at Metropolis, Ill., has served as a second crossing.

Although the bridge had been in service for 45 years, the original river crossing, consisting of seven 400-ft. and two 518½-ft. Whipple through truss spans, are still of adequate capacity to warrant their continued use, the floor system and certain of the truss members having been strengthened in 1914. However, the approaches, which consist entirely of deck spans, that were necessarily more exposed to the corrosive action of brine drippings and which embodied certain poorly designed details, had reached a condition that demanded their replacement.

Five-Degree Curve in South Approach

The south approach embraced one 249-ft. deck truss span (next to the river structure), twenty-one 150-ft. deck truss spans, and a 106-ft. span of the same type. The north end of the 249-ft. span was supported in pockets in the south side of the stone masonry pier that carries the end of the adjacent river span, and except for the stone masonry pier under the south end of this span the sub-structure embraced twin cylinder piers consisting of steel shells filled with concrete and resting on pile foundations. Immediately south of the river bridge this old viaduct was on a 5-deg. curve to the west, with short 2-deg. 30-min. curves at each end, embracing an aggregate central angle of 90 deg., so that the remainder of the structure was on a tangent at right angles to the river crossing.

The north approach originally embodied a structure of considerable length, but was replaced in 1904 by a high embankment except for two 249 ft. deck truss spans and a 50-ft. ballast deck girder span, supported on stone masonry piers and an abutment. This approach is located on the river crossing tangent. The bridge is entirely single-track, the double-track terminating in No. 18 turnouts on the embankments beyond the ends of the approach viaducts.

The New South Approach

In replacing the south approach structure, advantage was taken of the curve to develop a new alinement for the new viaduct on which construction could proceed without interference with the old bridge except for a distance of about 200 ft. at the north end where the two alinements converge. The change in the alinement is shown on the sketch plan. The maximum distance between the new and old center lines is about 70 ft.

The new south approach consists of a new 251-ft. riveted deck truss span next to the river structure, supported by the old piers, and a steel tower and deck-girder viaduct on concrete pedestals embracing 25 towers with 40 ft. spans, 26 80-ft. clear spans, one tower with a 30-ft. span and one 60 ft. deck girder span, the last two being at the south end. The details of the steel work embrace no departure from usual practice, except that the top flanges of the 80-ft. girders have only a single full-length cover plate, additional flange section in the region of greater bending movement being provided by side plates and secondary flange angles. Owing to the provision made in the design for centrifugal force on the curve, the outside 80 ft. girders weigh 26 tons, compared with 25 tons for the inside girders.

The 251-ft. span consists of two nine-panel Pratt trusses 18 ft. center to center, with top and bottom chords 31½ ft. center to center. The end posts at the south end are vertical, but those at the north end are

inclined to enable them to enter the pockets in the face of the river bridge pier. The floor beams frame into the posts but the stringers are supported on top of the floor beams.

The New North Approach

In the north approach, the old 249-ft. span next to the river structure was replaced by a new 251-ft. span on the old piers, but this plan did not prove favorable for the replacement of the other-deck truss span because the presence of a railroad crossing directly under the span would have made it expensive to construct the falsework required to erect the new span and take down the old one. This difficulty led to the development of a plan for a tower-and-girder viaduct involving two towers with spans of 43 ft. and 44 ft., respectively, one 90-ft. 6-in. girder span over the railroad crossing, and one 75-ft. 6-in. span at the north end. The columns of the towers are plumb and are spaced 22 ft. 8 in. center to center so that the towers and the girders could be erected outside of and without interference with the old trusses.

This plan necessarily involved a floor system which consists of floor beams framing into the webs of the girders, with stringers framing into the floor beams. This floor system was made shallow enough so that it could be installed in place of the old floor system without fouling the top chords of the old trusses, which were subsequently supported from the new steel while they were being cut apart. As shown in the cross-section of the deck of this new viaduct, the floor beams are knee-braced so that the spans have the general appearance of inverted through girders.

The old 50-ft. ballast deck girder span, which had been installed a number of years after the original bridge was built, was not renewed.

The top-flange cover plates of the 80-ft. and 60-ft. deck-girders, the top flange angles of the 40-ft. and 20-ft. deck-girders as well as the top flange angles of the stringers, the top cover plates of the floor beams and the gusset plates, the top angles of cross frames and top laterals of the deck truss spans and all rivets in these members were constructed of copper-bearing steel. In addition, the tops of the deck-girders and stringers were covered with Texaco protection against brine drippings.

The bridge is decked with creosoted southern pine ties, placed 12 in. center to center and arranged in successive groups of six as follows:

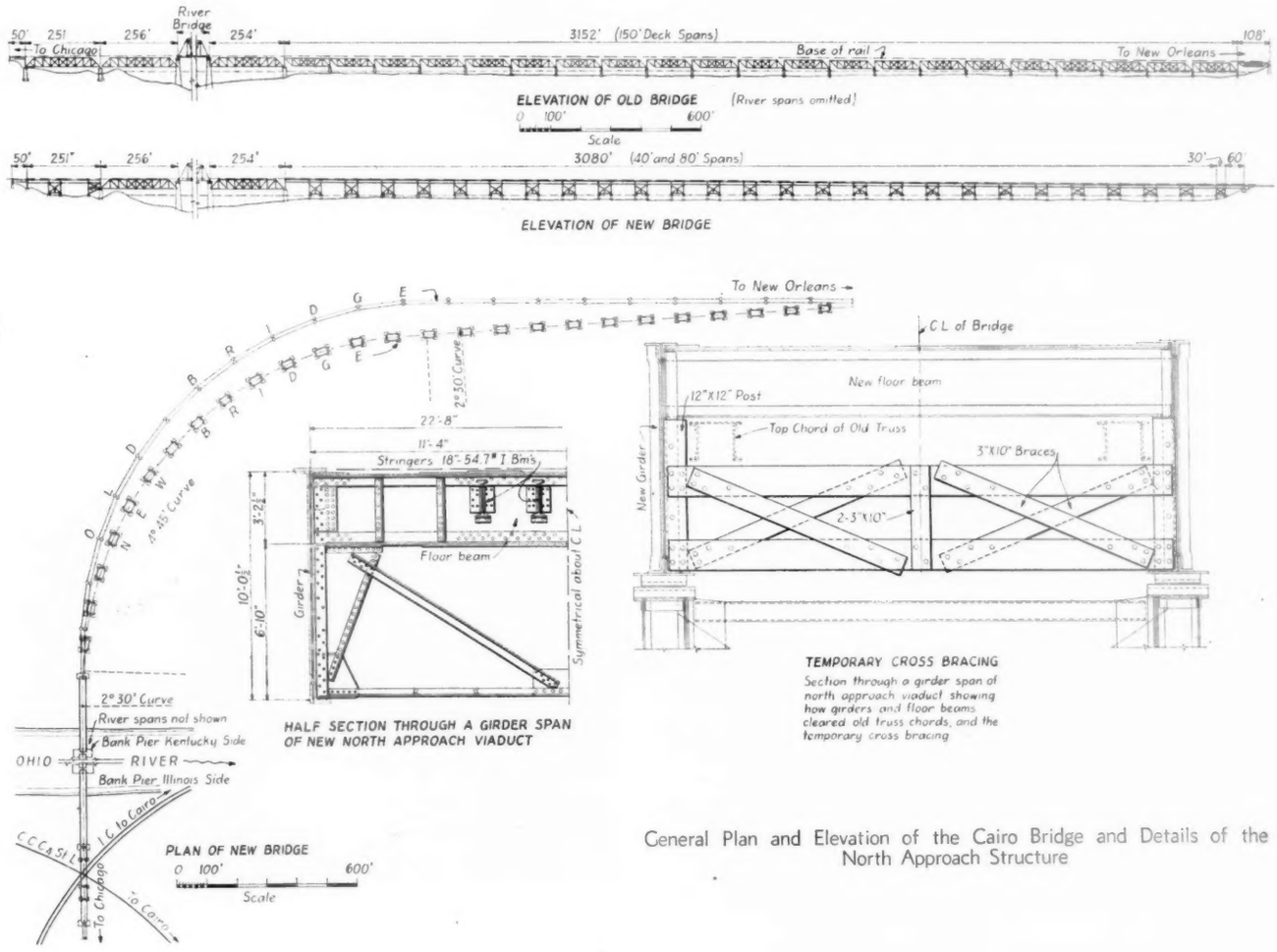
4 ties 8 in. by 10 in., 10 ft.

1 tie 8 in. by 12 in., 10 ft., dapped to anchor the track against lateral displacement.

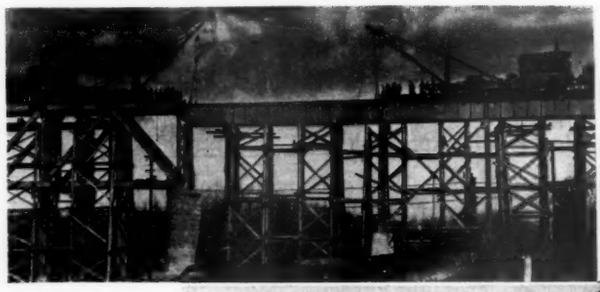
1 tie 8 in. by 10 in., 16 ft., to support cantilevered sidewalks consisting of three 2-in. by 10-in. planks.

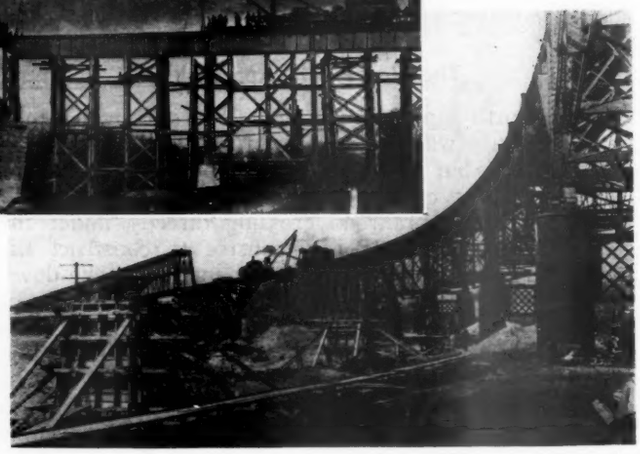
An exception to this arrangement obtains on the portion of the viaduct on the curve, where all ties are 12 in. deep. The guard timbers are 10 in. by 10 in., dapped over the ties to a net depth of 7½ in., while the outer edges of the sidewalks are provided with a 6-in. by 6-in. curb timber. The rails are 112-lb. RE section, laid with the GEO system of track fastenings.

The new substructure work for the south approach embraced the construction of a pocket abutment at the south end, supported on 31 creosoted pine piles 40 ft. long, and concrete pedestals for the columns of the viaduct towers. These pedestals are 5 ft. square at the top and are battered one inch to the foot on all four sides. The height of the neatwork ranges from 12 to 23 ft., and the footings are 4 ft. thick and 11 ft. 3 in. by



General Plan and Elevation of the Cairo Bridge and Details of the North Approach Structure





At the Right, Erecting the Last 80-ft. Girders in the South Approach—Below, a Construction View, Showing the Old South Approach at the Right and the River Spans in the Left Background

14 ft. in plan, except that 12 pedestals on the outside of the curve are 14 ft. square. They are all supported on creosoted piles from 20 to 25 ft. long with 20 piles per pedestal except that 25 piles were provided for those on the outside of the curve. The substructure work on the north approach was confined to six new concrete pedestals.

Construction

The following is a description of the construction operations on the south approach, which were on a much larger scale than those on the north approach. Special features of the work on the north approach will be reviewed separately.

The railway possessed an ample supply of work equipment for operations conducted on or from tracks, but as much of the work on the south approach had to be conducted on the ground at a considerable distance from the track, it was necessary to use off-track equipment and arrangements were made to rent the following machinery and appliances:

1 gasoline-operated crane for foundation excavation and placing concrete.
1 steam-operated crane for driving piles.
1 steam-operated crane for erecting the steel towers.
2 clamshell buckets.
1 creeper pile driver.
4 two-foot gage concrete cars with necessary track, switches, etc.
1 vertical steam boiler.
All cranes were of the crawler type.

Because the season was unusually dry, progress in the excavation for the footings was more rapid than had been anticipated, with the result that the crane originally employed on the pile driving could not keep up. This situation, which was aggravated by the hard driving encountered, led to the use of the creeper driver to supplement the work of the crane driver.

Concrete Work

The concrete was mixed by a steam-driven mixer set up in turn at four different locations, from which it was delivered to the pedestals in bottom-dump buckets mounted on narrow-gage cars. The buckets were handled by a crane when depositing the concrete in the forms. The concrete gang consisted of 14 to 16 laborers, a crane operator and a foreman. The aggregates were wheeled from storage piles into which they had been dumped from cars on the old viaduct. Cement and piles were unloaded at the south end of the approach and hauled by wagon to the point of use. To facilitate the delivery of material, a crossover was installed between the two main tracks about 2,500 ft. south of the end of double-track on the approach embankment to serve as a temporary double-track junction so that the southbound track north of that point could be used as a work track.

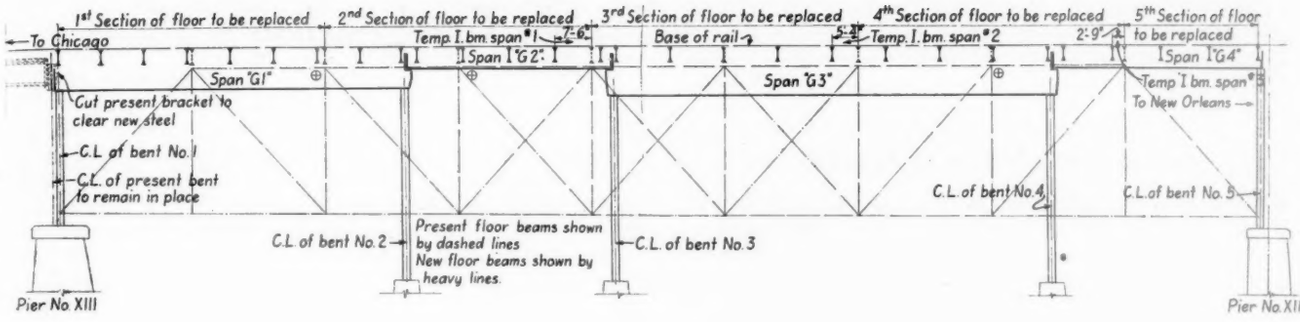
The river side of the south approach embankment was widened to accommodate the change in alinement and the 15,000 cu. yd. of material required was obtained from an adjacent borrow pit. This work was done with an elevating grader, a motor truck and several wagons hauled by three-mule teams.

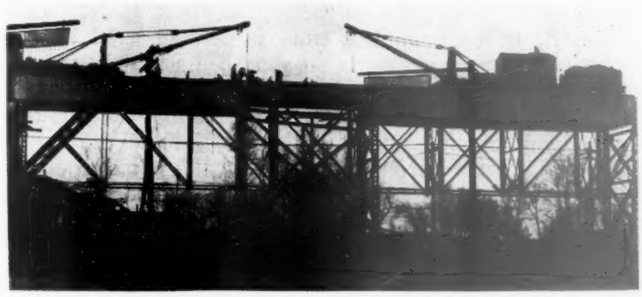
Erect Towers with Crawler Crane

The fact that the ground surface at the site of the new viaduct was reasonably level suggested the use of ground equipment for the erection of the towers, thereby avoiding the loss of time that would have resulted from the repeated change in booms that would have been required if the towers as well as the girders had been erected by a derrick car working on the deck. Accordingly, this plan was adopted; the tower steel was lowered to the ground from cars spotted on the old viaduct opposite the various tower sites and erected by a crawler-mounted crane with a 60-ft. boom.

The girders and girder laterals and cross frames were unloaded from cars on the work track on the approach embankment, using two derrick cars to lower the 80 ft. girders onto the ground. However, for erection the girders were carried out in turn from the end of the bridge to their places in the structure while suspended from the 57-ft. boom of a 50-ton derrick car. This was necessarily a slow operation, and because of the large area of the 80-ft. girders, extra precautions had to be taken whenever there was any appreciable wind. The last pair of girders to be erected had to be transported over half a mile and each movement required about 40 min. To keep the derrick car level on the portion of

The Towers Were Erected by a Crawler-Mounted Crane


1st Section of floor to be replaced
2nd Section of floor to be replaced
3rd Section of floor to be replaced
4th Section of floor to be replaced
5th Section of floor to be replaced
To Chicago
Temp. I. bm. span #1
Base of rail
Temp. I. bm. span #2
Span "G1"
Span "G2"
Span "G3"
Span "G4"
Temp. I bm. span #
To New Orleans
Cut present bracket to clear new steel
C.L. of bent No. 1
C.L. of present bent to remain in place
C.L. of bent No. 2
Present floor beams shown by dashed lines
New floor beams shown by heavy lines.
C.L. of bent No. 3
C.L. of bent No. 4
C.L. of bent No. 5
Pier No. XIII
Pier No. XII



Above, Reproduction of the Erection Diagram for the Four-Span, Tower-and-Girder Structure That was Built Around One of the Old 250-ft. Deck Truss Spans—Construction View at the Right

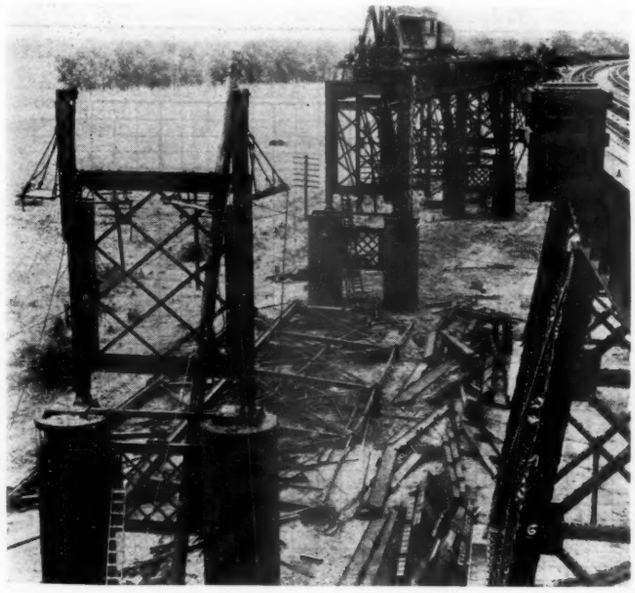
the viaduct that was superelevated for curvature, 90-lb. rail was laid on the outside of the curve until erection was completed.

The deck timbers were unloaded from the old viaduct and distributed by wagon to piles along the line of the new structure to be picked up by slings in regular order and hoisted to the deck. All ties were marked by tags. Two steam-driven locomotive-type air compressors were set up on the ground along the viaduct to supply air for riveting and for the power drills used by the decking crew, while two Ingersoll-Rand tie-tamper compressors supplied air for spray painting.

Replacing the 249-Ft. Truss Span

For the replacement of the 249-ft. deck span at the north end and for the erection of that part of the new viaduct that replaced the adjacent 150-ft. span it was necessary to place the old spans on falsework, take down the old trusses and then remove the old floor system to make way for the new steel. In the case of the new 251-ft. deck span, the only special feature involved concerned the erection of the bottom chords, which had to be pushed into position endwise from the south end of the falsework to get them inside of the batter piles. In addition, it was necessary to stop this operation short of the final position to complete the endpin assembly, and then push the chords into place in the pockets of the piers, as there was not room enough in the pockets to drive the pins.

It was also necessary to place two adjacent 150-ft. spans on falsework and dismantle them because they fouled one tower and two 80-ft. spans of the new viaduct. The falsework was constructed so as to provide room for the erection of the tower and to permit the erection of the north 80-ft. girder span complete on the upstream-side of the operated track and the south 80-ft. span about 18 in. downstream from its final position. Then, as sections of the old floor system and the falsework were removed, the 80-ft. girder spans were slid into place and the tower girders were set with the derrick car.



How the Old Viaduct Spans Were Dismantled

Erection of the North Approach

The erection of the 251-ft. truss span in the north approach and the girders and floor of the viaduct structure entailed the use of the operated track and had to be carried on during intervals between trains. The most critical phase of this work was the renewal of the floor system, since this involved the cutting out of sections of the old floor and the setting in of sections of the new floor. This plan involved the use of temporary stringers spanning between the last new floor beam erected and the next old floor beam to be removed whenever the work was suspended for train movements, and while this imposed no difficulty on the south truss span where both the new and the old floors rested on falsework, it did introduce a special problem when this transition panel was near the center of the old north deck truss span, where the old floor beam, which was supported by the truss span, was subject to far more deflection than the adjacent new floor beam. The resultant bending in the end connections of the temporary stringers was reduced to a minimum by making these connections as flexible as possible.

Another complication was introduced by the presence

on the structure of the double-track turnout with remote-controlled switch. When the floor was changed under this turnout, the turnout was picked up bodily, moved off the bridge and restored to position after the change was made.

Wrecking the Old South Approach

Studies for the development of an economical method for wrecking the deck truss spans of the old south approach resulted in an ingenious procedure. The old spans consisted of two deck Pratt trusses of rather unusual design, in that they were supported at their south or downhill ends by means of inclined end posts that rested on bearing shoes on the tops of the cylinder piers, while the north or uphill ends were supported at the elevation of the top chords on steel bents that rested on the piers. A derrick car backing up as the work proceeded from north to south, could readily remove the floor, sway bracing and laterals, and handle the south ends of the trusses from a position on the adjacent span, but it was necessary to devise some scheme for handling the north ends of the trusses.

For that purpose, the structural steel bent at the north end of the span was made to serve as a double gin pole, by guying it with cables and splicing to the tops of the posts short sections of posts from a similar bent so that tackle blocks supported from the tops of these extensions were up high enough to permit a hitch to be taken on the end of the top chord. With a hitch taken on the other end of the truss by the derrick car, the posts were cut with torches at each end and the trusses, except the end posts at the south end, were lowered to the ground. These end posts were held in place by backstays to the adjacent span, and were lowered to the ground as a separate operation. The steel gin pole was then taken down with a wood gin pole. The wrecking of the trusses was handled in such a way that compression members of the trusses could be salvaged for further use as structural members. All other members will be sold as scrap.

The work on the Cairo structure was done under the general administration of A. F. Blaess, chief engineer, and under the direction of C. C. Westfall, engineer of bridges, with J. H. Graham, assistant engineer, supervising the concrete work, and F. E. Taggart, assistant engineer, and S. F. Grear, assistant engineer of bridges, supervising the temporary bridge work and steel erection.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended September 21 showed a further increase to 707,644 cars, an increase of 7,287 cars as compared with the week before and of 63,146 cars as compared with the corresponding week of last year. While part of the increase was in the heavy loading of coal in anticipation of a miners' strike, an even greater increase over last year was shown in the loading of miscellaneous freight. Live stock was the only commodity classification to show a decrease under last year's figures but coal and grain showed decreases under the week before. Loading of live stock in the first 38 weeks of 1935 has amounted to 474,432 cars, a decrease of 37.4 per cent as compared with the corresponding period of last year when the government was buying and shipping live stock from drought areas. The summary, as compiled by the Car Service Division of the Association of American Railroads, follows:

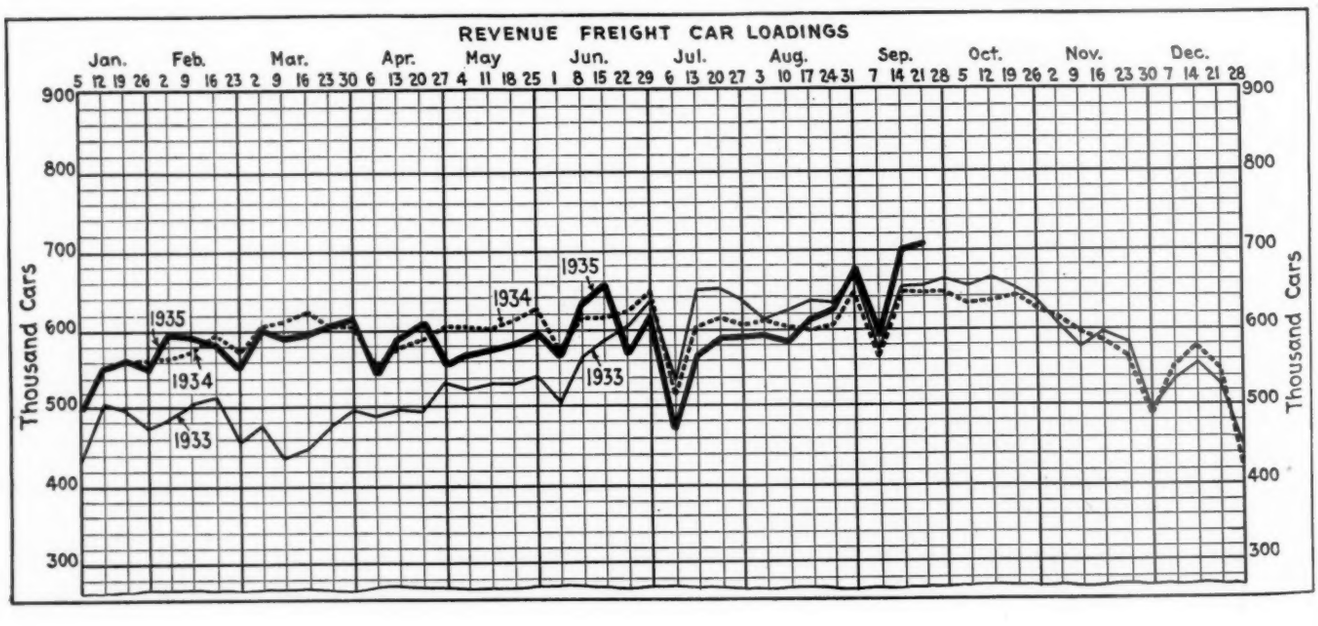
Revenue Freight Car Loading

For Week Ended Saturday, September 21

Districts	1935	1934	1933
Eastern	147,741	133,758	141,091
Allegheny	132,283	115,620	125,813
Pocahontas	49,256	43,448	48,680
Southern	102,013	88,516	89,713
Northwestern	112,829	99,509	99,831
Central Western	104,643	105,465	99,783
Southwestern	58,879	58,182	54,955
Total Western Districts	276,351	263,156	254,569
Total All Roads	707,644	644,498	659,866
Commodities			
Grain and Grain Products	42,552	32,965	33,806
Live Stock	18,499	32,248	21,702
Coal	133,234	121,439	120,890
Coke	6,571	5,291	6,648
Forest Products	33,058	23,115	25,498
Ore	36,310	24,226	37,986
Merchandise L.C.L.	166,630	164,082	174,839
Miscellaneous	270,790	241,132	238,506
September 21	707,644	644,498	659,866
September 14	700,357	647,485	660,086
September 7	592,786	563,883	577,933
August 31	679,861	647,531	673,778
August 24	626,373	606,917	637,510
Cumulative Total, 38 Weeks	22,507,647	22,716,368	20,945,494

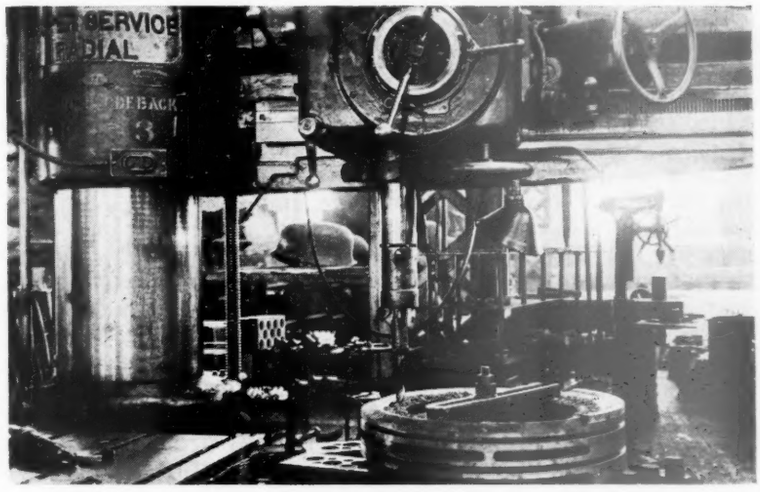
The freight car surplus for the last half of August averaged 245,222 cars, a decrease of 42,384 cars as com-

(*Continued on page 436*)



Six Years of Progress Displayed

First machine tool show since 1929 attracts wide attention—Developments for railway shops included



FIVE and one half acres of floor space; 250 exhibits of machine tools, small tools and other shop equipment; 50,000 visitors; sales variously estimated from five to ten million dollars. This, statistically, presents the Machine Tool Show conducted by the National Machine Tool Builders' Association at Cleveland, September 11 to 21 inclusive. Not only was it the most successful exhibit conducted by the machine tool industry, but it was an event of great significance as a portent of what the future holds for American industry in general.

It is no new thought to readers of the *Railway Age* that the depression has been far more the result of the loss of business and employment in the durable-goods industries than it has been the result of the loss of business and employment in the industries producing the things of every-day consumption. Not only is the machine-tool industry a durable goods industry; it is one of the industries within that general classification which depends entirely upon capital expenditures for its business. The monthly index of orders for machine tools shown in the chart presents unmistakable evidence of an upturn in the flow of capital, signifying a long step toward a restoration of normal economic processes. Other evidences point in the same direction—the great interest in and large attendance at the recent exhibit; the extensive purchases made at the show, and the general inability to secure early deliveries of machine tools which purchasers now coming into the market are experiencing.

Large Attendance of Railroad Men

But this machine-tool show is of interest to the railroads in more ways than is a hopeful sign of better times ahead. While a large number of the exhibits presented types of tools suited for the production industries rather than for the railroad shop, developments which have taken place in all of the general-purpose types of tools used in the railroad shop, since the last previous machine tool show in 1929, were represented at Cleveland this year, and 400 railroad men—executives, departmental officers and supervisors—from 63 American railroads came to Cleveland to see them.

The facts which stood out most prominently when viewing the progress in machine tools displayed at the show are that, regardless of the type of machine in which one may be interested, the builders have incorporated in their designs the greater strength and rigidity necessary to permit the use of the new cutting tools developed during the last few years. With these new cutting materials production heretofore considered impossible can be obtained with a precision and quality of finish equal to any requirements. Greater machine service life and lower maintenance costs have been built into machines by the increasing use of anti-friction bearings and highly developed lubrication systems. In order to make it possible for the operator to secure maximum output for these modern machines, the development of mechanical and electrical controls has progressed to a point where, even with the largest machine tools, it is now possible for an operator to control every movement of the machine from a single position. It was explained by one machine-tool engineer that for some time efforts to improve machine-tool operations were concentrated upon the problem of reducing the actual machine time. It was not long before the efforts in this direction made it possible to reduce machining time through the use of higher cutting speeds with more efficient cutting tools and the introduction of greater machine power to a point where the machining time on a given operation was considerably less than the time required to set up the work and make tool changes between operations. Most of the machines at the show gave evidence of the fact that the concentration of engineering effort on the part of the machine-tool builders has recently been turned to a reduction in handling time, with the result that through the use of pneumatic, mechanical, hydraulic and electrical devices the machine-handling time has been reduced to an unbelievable extent.

On those tools in which railroad men are primarily interested this phase of machine-tool development was best exemplified in the planers and planer type milling machines, the radial drills, the engine and turret lathes, and the milling and boring machines. Outstanding examples of the extent to which control of machine-tool operations has been simplified are those, such as a large milling machine, in which all operations involved in the actual handling of the machine are controlled from a single small pendant switchboard at the operator's station, and a turret lathe on which refinement of control has been carried to a point where the machine, while

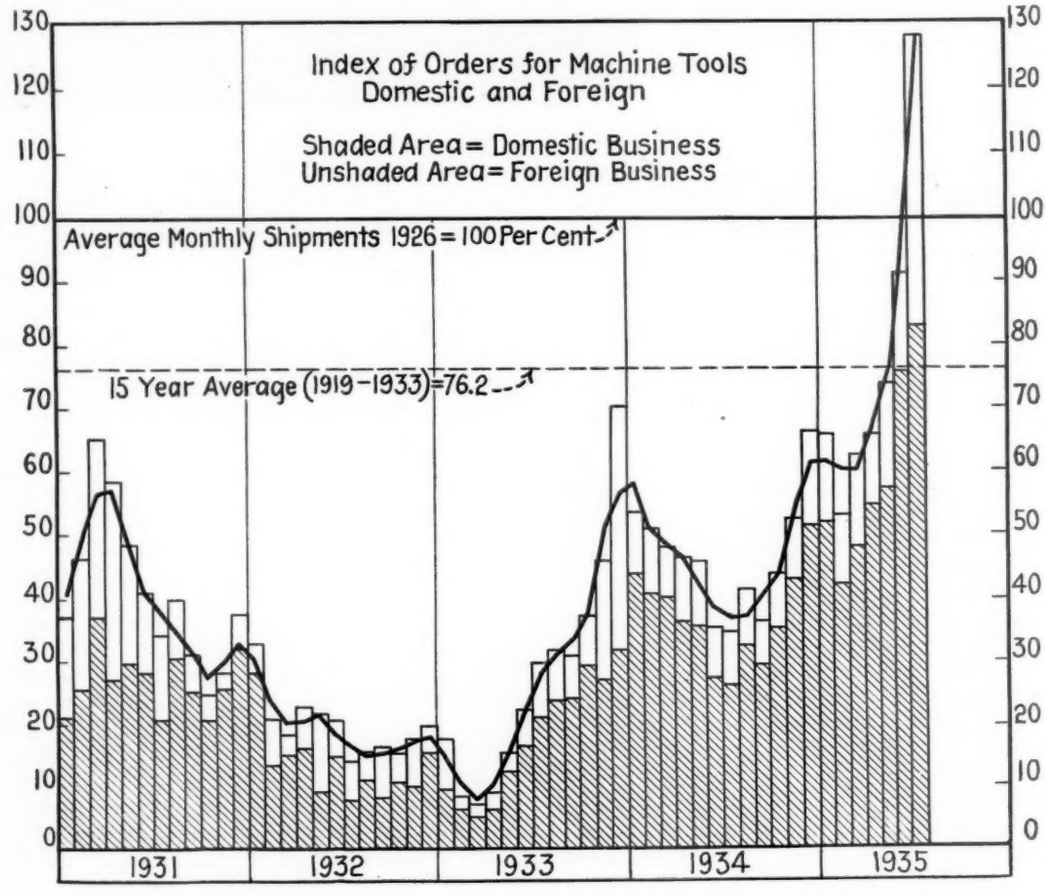
it is performing one operation, is actually prepared for the next operation. This is accomplished by a preselector head in which speed changes can be made while the machine is in operation so that while one cutting operation is in progress the operator merely moves a cylinder, on which operation numbers are set up, to the next number in a sequence and, when the first operation is completed, the rapid movement of a single lever immediately starts the machine going on the next operation.

Those in the railroad industry who may have felt that the shaper and the planer were gradually being pushed into the background were forced to revise their opinion when they saw what has been done to modernize these two types of machines so well known in railroad work. The application of new control and new fixtures and higher speeds has made possible production on these types of machines which bids fair to keep them in the picture for some time to come. Among the unusual things seen in the field of planer design was a new type of machine which cuts in both directions, thereby opening up new possibilities in the field of planer work.

That the surface of possibilities in the use of grinding for railroad finishing operations has only been touched is indicated by many of the grinding operations seen at the show. Not only have grinding machines been adapted to many new types of work, but also the development in grinding wheels and fixtures has made it possible to produce finishes on parts which will contribute to longer life of many locomotive parts with a consequent reduction in the cost of maintenance. In the field of milling machines, both large and small, the combined development of easily controlled machines, greater power, more efficient cutting tools, and ingenious fixtures have shown the way to the reduction in cost on many locomotive machining operations to a point far below that which is now common to the average railroad shop. One of the interesting exhibits, from a railroad standpoint, was a modern milling machine working on shoes and wedges which actually produced during the progress of the show over 300 wedges for use on a large eastern railroad.

An Impressive Display

The accomplishments of an industry which has ceased to look backward and is working toward the future, represented no less by the Machine Tool Show itself than by the progress embodied in the machines there on display, have left an indelible impression in the minds of those who attended. Its significance to all metal-working plants was suggested by the statement of one executive of a progressive industry who, after a day at the show, said that, in the light of the developments he had seen, his entire plant would need to be completely retooled during the next five years.



From 1919 to 1933 Inclusive the curve represents the index of machine tool orders compiled by the National Machine Builders' Association adjusted to 1926 base. Beginning with January 1934 orders for forging machinery are included.

THE ST. LOUIS PUBLIC SCHOOLS free evening traffic courses, sponsored by the Traffic Club of St. Louis, opened for the Fall term on September 16. These courses, which have been conducted for the past eight years, have been enlarged and improved each year and now embrace practically every phase of traffic work.

Railroad Reorganizations from 1915 to 1933 Analyzed

A statistical study of balance sheet items showing changes in financial structures

WASHINGTON, D. C.

A STATISTICAL analysis of the reorganizations of 31 Class I railroads effected through court procedure during the period from 1915 to 1933, prepared by D. Philip Locklin in the Bureau of Statistics of the Interstate Commerce Commission, has been made public by the commission with a statement that it has not been considered or adopted by the commission. The study was undertaken to determine the changes in the financial structure of the companies resulting from the reorganization.

The study is based upon a comparison of the balance sheet items of the companies before and after reorganization, together with certain other information. In most cases the comparison is made between the balance sheets immediately before and immediately after reorganization, but in a few cases comparison had to be made between the balance sheets prior to reorganization and at the end of the year following reorganization. Of the 31 reorganizations, 18 took place after the Interstate Commerce Commission had been given control over new security issues of railroad companies; 13 occurred prior to that date.

Total Assets

The financial reorganizations were accompanied by a decrease in the stated value of the total assets of the companies. Before reorganization the assets totaled $3,412,745,746. After reorganization the stated value of all assets was $2,964,109,935—a reduction of $448,635,811 or 13.15 per cent. Of the 31 companies, however, there were 10 which reported an increase in total assets as a result of the reorganization.

The 31 railroads reduced their Investment in Road and Equipment and Improvements on Leased Railway Property accounts by $279,392,938, or 10.06 per cent. Ten of the 31 companies, however, increased the amount carried in these accounts, and 21 reduced the amount.

Investment and Modified "Final Value"

Before reorganization the investment in road and equipment as shown by the balance sheet plus improvements on leased railway property less accrued depreciation on road and equipment was greater than the commission's final value, modified on a statistical basis described below, for 29 out of the 30 railroads. The modification was made by adding to or subtracting from the commission's "final value" as of valuation date excluding working capital, the net changes in investment in road and equipment and in improvements on leased railway property and changes in accrued depreciation on road and equipment occurring between valuation date and date of reorganization, as reflected in annual reports in the Bureau of Statistics. For only one of the companies—the Denver & Salt Lake Railroad—was the investment less than the valuation before reorganization. After reorganization there were eight companies which had an investment figure less than the valuation ascertained on the above basis. All of these eight reorganizations took place after the Interstate Commerce Commission was given control over new security issues. Nine reorganizations occurring after the commission was given control over security issues, however, still showed an investment in excess of the valuation. Eighteen of the 30 companies brought their investment below the valuation or more nearly in relation thereto as a result of the reorganizations. Eleven reorganizations resulted in a greater discrepancy between investment and valuation. In one instance an investment considerably less than the valuation as above ascertained was brought more nearly to the latter amount.

Reduction in Funded Debt

The total funded debt of the 31 companies was $1,888,252,896 prior to reorganization. After reorganization this amount was reduced to $1,515,875,635, a decrease of $372,377,261 or 19.72 per cent. Three carriers eliminated their funded debt completely; 20 reduced their funded but did not completely eliminate it; and 8 carriers increased their funded debt. Those increasing their funded debt, and the percentage increase in each case, are shown below:

Road	Per cent increase
St. Louis & San Francisco	0.09
Denver & Salt Lake	3.81
Chicago, Milwaukee & St. Paul	5.02
New Orleans Great Northern	7.48
Central Vermont	28.13
Missouri, Kansas & Texas of Texas	37.64
International & Great Northern	44.31
Missouri, Kansas & Texas	44.36

The amount carried in the account—Funded Debt Matured and Unpaid—was reduced 97.93 per cent. The amount carried in the account—Funded Debt Unmatured—was reduced only 12.06 per cent.

Reduction in Long-Term Debt

The total long-term debt of the 31 companies was $2,038,929,893 before reorganization and $1,517,644,777 afterwards. This represents a reduction of $521,285,116 or 25.57 per cent. The greater reduction in total long-term debt than was obtained for funded debt alone is accounted for by the fact that receivers' certificates were reduced by 96.99 per cent, and nonnegotiable debt to affiliated companies was reduced 99.73 per cent. In fact only one carrier failed to eliminate receivers' certificates completely and the same was true of nonnegotiable debt to affiliated companies. Six companies increased their total long-term debt. Twenty-five effected reductions. Of these, three had no long-term debt after reorganization.

Long-term fixed-interest-bearing obligations were reduced from $2,025,031,206 to $1,139,592,299. This was a reduction of $885,438,907 or 43.72 per cent. Not a single one of the 31 companies failed to effect a reduction.

Fixed-interest-bearing long-term obligations are of

three kinds: (1) funded debt, income bonds excluded; (2) receivers' certificates; and (3) nonnegotiable debt to affiliated companies. The reductions in each group, and the percentage reduction of each type are shown below:

Item	Decrease	Per cent decrease
Funded Debt, Income Bonds excluded	$736,531,052	39.30
Receivers' certificates	48,390,253	96.99
Nonnegotiable Debt to Affiliated Companies	100,517,602	99.73
Total	$885,438,907	

The total reduction of $885,438,907 was distributed as follows:

Item	Per cent of total decrease
Funded Debt, Income Bonds excluded	83.18
Receivers' certificates	5.47
Nonnegotiable Debt to Affiliated Companies	11.35
Total	100.00

Income bonds were issued in connection with 10 of the reorganizations. In two cases income bonds issued by the old company were eliminated or reduced. Taking the companies as a whole income bonds were increased from $13,898,687 prior to reorganization to $378,052,478 afterwards. This represents an increase of $364,153,791.

The total capital stock of the 31 companies was increased from $1,032,215,749 to $1,247,183,415 as a result of the reorganizations—an increase of $214,967,666 or 20.83 per cent. Of the 31 companies 19 increased the amount of capital stock outstanding as a result of the reorganization process, while only 12 reduced the amount.

Reduction in Total Capitalization

The total capitalization of the companies, that is, long-term debt plus capital stock, decreased from $3,071,338,142 before reorganization to $2,764,828,192 after reorganization. This represents a decrease of $306,509,950 or 9.98 per cent. Of the 31 companies 8 had a larger total capitalization after the reorganization than before. These were the Chicago, Milwaukee & St. Paul with an increase of $45,622,824, or 6.80 per cent; the St. Louis & San Francisco with an increase of $8,206,957 or 2.35 per cent; the Wheeling & Lake Erie with an increase of $4,987,826 or 7.18 per cent; the Chicago & Eastern Illinois with an increase of $12,440,886 or 15.95 per cent; the International & Great Northern with an increase of $11,645,060 or 35.42 per cent; the Missouri, Kansas & Texas with an increase of $79,354,397 or 43.52 per cent; the Denver & Salt Lake with an increase of $5,675,072 or 41.86 per cent; and the Georgia & Florida with an increase of $1,773,613 or 9.38 per cent.

The other 23 companies reduced their total capitalization in the reorganizations. The percentage reduction ranged from 3.39 per cent by the New Orleans, Mobile & Chicago to 89.82 per cent by the Kansas City, Mexico & Orient. The largest aggregate reduction was by the Western Pacific which reduced its capitalization by $83,374,652.

The Cincinnati, Indianapolis & Western was the only road reducing its total capitalization which did not also reduce its capitalization per mile of line owned. This road reduced its total capitalization but increased its capitalization per mile from $44,447 to $47,095. No road that increased its total capitalization reduced its capitalization per mile of line owned.

Nearly the same story is told by figures showing changes in capitalization per mile of line operated. Only one railroad that reduced its total capitalization failed to reduce its capitalization per mile of line operated; and only one road which increased its total capitalization failed to increase its capitalization per mile of line operated.

The failure of the 31 carriers as a group to decrease their total capitalization by a greater amount is said to be explained by the common practice of issuing capital stock or income bonds in exchange for defaulted fixed-interest-bearing obligations.

Ratio of Funded Debt to "Total Capital"

The ratio of funded debt to capital stock plus funded debt, sometimes called the ratio of funded debt to "total capital," is often cited as significant in the financial set-up of railroad companies. Before reorganization this ratio for the 31 companies as a group was 64.66 per cent.

Changes in Total Capitalization

Road	Total capitalization—Before reorganization	Total capitalization—After reorganization	Decrease	Per cent decrease
Wabash R. R. Co.	$218,649,566	$205,554,200	$13,095,366	5.99
Cincinnati, Indianapolis & Western	16,045,520	13,375,000	2,670,520	16.64
Atlanta, Birmingham & Atlantic	71,616,424	39,255,787	32,360,637	45.19
New Orleans, Texas & Mexico	39,741,289	36,550,312	3,190,977	8.03
Western Pacific	175,458,612	92,083,960	83,374,652	47.52
St. Louis & San Francisco	349,399,102	357,606,059	*8,206,957	*2.35
Wheeling & Lake Erie	69,453,546	74,441,372	*4,987,826	*7.18
New Orleans, Mobile & Chicago	22,979,075	22,199,900	779,175	3.39
Pere Marquette	110,506,035	105,000,000	5,506,035	4.98
Wabash-Pittsburgh Terminal Ry. Co.	60,427,267	39,600,000	20,827,267	34.47
Missouri Pacific	428,535,504	382,057,220	46,478,284	10.85
Colorado Midland Ry.	17,845,100	9,780,000	8,065,100	45.20
Missouri, Oklahoma & Gulf	36,670,334	7,573,722	29,096,612	79.35
Chicago & Eastern Illinois	77,989,750	90,430,636	*12,440,886	*15.95
Tennessee Central	20,574,753	6,300,000	14,274,753	69.38
Missouri & North Arkansas	18,649,000	6,500,000	12,149,000	65.15
International & Great Northern	32,874,940	44,520,000	*11,645,060	*35.42
Fort Smith & Western	11,789,363	6,848,863	4,940,500	41.91
Missouri, Kansas & Texas of Texas	81,613,789	52,616,654	28,997,135	35.53
Missouri, Kansas & Texas	182,335,916	261,690,313	*79,354,397	*43.52
Columbus & Greenville	250,000	155,000	95,000	38.00
Kansas City, Mexico & Orient	59,164,700	6,024,500	53,140,200	89.82
Atlanta, Birmingham & Atlantic	38,956,407	30,073,255	8,883,152	22.80
Denver & Salt Lake	13,558,773	19,233,845	*5,675,072	*41.86
Georgia & Florida	18,903,000	20,676,613	*1,773,613	*9.38
Toledo, Peoria & Western	8,973,310	1,005,000	7,968,310	88.80
Chicago, Milwaukee & St. Paul	671,331,915	716,954,739	*45,622,824	*6.80
Central Vermont	42,247,585	27,334,000	14,913,585	35.30
Chicago & Alton	128,412,100	75,545,400	52,866,700	41.17
San Diego & Arizona	30,147,467	3,625,042	26,522,425	87.98
New Orleans Great Northern	16,238,000	10,216,800	6,021,200	37.08
Total	$3,071,338,142	$2,764,828,192	$306,509,950	9.98

* Increase.

After reorganization the ratio was 54.86 per cent. The ratio for the railways of the United States as a whole was 55.7 per cent in 1933. Thus the ratio of the 31 companies before reorganization was somewhat higher than that of the railroads of the United States as a whole. The reorganizations reduced the ratio only slightly below the general average of the country. The lowest ratio of funded debt to "total capital" among the 31 companies before reorganization was 22.35 per cent—the ratio of the Atlanta, Birmingham & Atlantic prior to its second reorganization. The Denver & Salt Lake had the highest ratio—95.92 per cent. After reorganization

3 companies had no funded debt, but several had extremely high ratios of funded debt to total capital. The New Orleans Great Northern had a ratio of 91.93 per cent; the Missouri, Kansas & Texas of Texas had a ratio of 97.34 per cent, and the Toledo, Peoria & Western, 99.50 per cent.

Twenty-five carriers reduced the ratio, six carriers increased it. Those increasing the ratio were the Missouri & North Arkansas, the Fort Smith & Western, the Missouri, Kansas & Texas of Texas, the Missouri, Kansas & Texas, the Toledo, Peoria & Western, and the New Orleans Great Northern.

Ratio of Long-Term Debt to Total Capitalization

The ratio of long-term debt (funded debt plus receivers' certificates plus nonnegotiable debt to affiliated companies) to the total capitalization of the 31 companies taken as a group was 66.39 per cent prior to reorganization. As a result of the reorganizations this ratio was reduced to 54.89 per cent. As a result of the reorganizations the ratio of long-term debt to total capitalization was reduced in 27 instances, in three of which long-term debt disappeared entirely. Four carriers, however, emerged from reorganization with a larger ratio of debt to capitalization than before. These were the Fort Smith and Western which increased the ratio from 57.59 to 81.78 per cent; the Missouri, Kansas & Texas of Texas which increased its ratio from 87.56 to 97.34 per cent, the New Orleans Great Northern which increased it from 53.81 to 91.93 per cent, and the Toledo, Peoria & Western from 54.57 to 99.50 per cent.

The effect of the reorganizations was to change substantially the distribution of companies according to the percentage of capitalization in the form of long-term debt. It reduced the number of lines having a ratio of over 50 per cent from 27 to 15. The distribution before and after reorganization is shown below:

Per cent of capitalization in long-term debt	Number of companies: Before reorganization	After reorganization
0 — 9.9	..	4
10 — 19.9	..	2
20 — 29.9	1	4
30 — 39.9	..	4
40 — 49.9	3	2
50 — 59.9	11	5
60 — 69.9	4	3
70 — 79.9	5	2
80 — 89.9	4	2
90 — 99.9	3	3
	31	31

Ratio of Long-Term Debt to Investment

The ratio of long-term debt to total capitalization is said to be subject to a number of infirmities as an indication of sound financial structure. One of these is the fact that a high ratio of indebtedness to total capitalization may be not be burdensome if the total capitalization is small relative to the carrier's investments. Prior to reorganization the per cent of investment represented by long-term debt of the 31 carriers was 64.41. After the reorganization it was 56.01 per cent. The reduction was small, although a number of companies greatly reduced their ratios as a result of reorganization. In a number of cases the ratio exceeded 100 per cent prior to reorganization and was substantially reduced in the reorganization process. Thus the Missouri, Kansas & Texas Ry. Co. of Texas reduced its ratio of long-term debt to total investment from 107.48 per cent to 85.59 per cent; the Central Vermont from 135.73 per cent to 55.95 per cent; the New Orleans, Texas & Mexico from 110.34 to 64.38 per cent; the San Diego & Arizona from 115.76 to 19.92 per cent; the Missouri, Oklahoma & Gulf from 118.01 to 11.98 per cent; the Columbus & Greenville from 239.16 to 74.56 per cent. In all, there were 21 carriers which reduced their ratios of indebtedness to total investment as a result of reorganization. On the other hand, there were 10 which increased the ratio of long-term debt to investment by the reorganization.

In the preceding section it was noted that four carriers increased the ratio of long-term debt to total capitalization. One of those, however—The Missouri, Kansas & Texas of Texas—reduced its ratio of long-term debt to total investment. The other three not only increased the ratio of long-term debt to total capitalization but also the ratio of long-term debt to total investment. Furthermore, seven carriers which reduced the ratio of debt to total capitalization increased the ratio of debt to total investment. These were the St. Louis & San Francisco, the Tennessee Central, the Missouri & North Arkansas, the International & Great Northern, the Missouri, Kansas & Texas, the Chicago, Milwaukee & St. Paul, and the Chicago & Alton. Three carriers after reorganization had an indebtedness exceeding their total investments. These were the Tennessee Central, the Missouri & North Arkansas, and the Toledo, Peoria & Western.

The ratio of long-term debt to total investment, it was stated, does not give a true picture of the debt burden of a carrier if the property accounts are overstated or if other investments are carried at an excessive valuation. For this reason a comparison of long-term debt with the "final values" supplemented by the changes in property accounts referred to earlier in the study was made. Before reorganization long-term debt exceeded the valuations in 22 instances, and the ratio for the carriers as a whole was 111.85 per cent. After reorganization the number of companies which had a long-term debt in excess of the valuations was reduced to 7, and the ratio for the group of carriers as a whole was 83.55 per cent.

Fixed Charges

The total fixed charges of the 31 companies before reorganization were $101,194,673 per year. After reorganization fixed charges were $56,834,650. This represents a reduction of $44,360,023 or 43.84 per cent. The degree to which fixed charges were reduced, however, varied widely between individual companies. The smallest reduction was by the International & Great Northern which reduced its fixed charges by only 2.44 per cent. At the other extreme was the New Orleans, Mobile & Chicago, which reduced its fixed charges 99.76 per cent. Six of the companies reduced their fixed charges over 90 per cent; 2 between 80 and 89.9 per cent; 5 between 70 and 79.9 per cent; 5 between 60 and 69.9 per cent; 2 between 50 and 59.9 per cent; 3 between 40 and 49.9 per cent; 4 between 30 and 39.9 per cent; 2 between 20 and 29.9 per cent; 1 between 10 and 19.9, and 1 less than 10 per cent. Thus 20 out of the 31 companies reduced their fixed charges by more than 50 per cent.

The railroads were able to reduce some classes of fixed charges more than others. The following table shows the amount and percentage reductions of the important classes of fixed charges:

Item	Decrease	Per cent decrease
Interest on funded debt	$25,968,618	33.01
Interest on receivers' certificates	2,795,680	97.64
Interest on nonnegotiable debt to affiliated companies	1,741,372	100.00
Interest on unfunded debt	12,223,046	94.50
Amortization of discount on funded debt	1,056,780	94.93
Other fixed charges	574,527	14.80
Total	$44,360,023	

The total reduction of $44,360,023 in fixed charges

was distributed between the various classes of fixed charges as follows:

Item	Per cent of total decrease
Interest on funded debt	58.54
Interest on receivers' certificates	6.30
Interest on nonnegotiable debt to affiliated companies	3.93
Interest on unfunded debt	27.55
Amortization of discount on funded debt	2.38
Other fixed charges	1.30
Total	100.00

Reductions in interest on funded debt and in interest on unfunded debt accounted for over 86 per cent of the total reduction. This is largely because interest on funded debt and interest on unfunded debt are by far the largest items in the total fixed charges, constituting 77.73 and 12.78 per cent respectively of the total fixed charges before the reorganizations.

Average Rate of Interest

Considering the 31 companies as a group, the reduction in fixed charges was accomplished through reducing long-term debt rather than by a reduction of interest rates on borrowed capital. The average rate of interest on funded debt of the 31 carriers was 4.61 per cent prior to reorganization and 4.66 per cent after. The average rate was reduced by only 5 companies. It was increased in 18 cases and remained unchanged in 3 instances. In 4 instances no comparison is possible, as there was no funded debt after reorganization. In one instance there was a funded debt after reorganization but not before.

The issuance of income bonds in reorganizations results in the substitution of contingent interest charges for fixed charges. The total contingent interest charges of the 31 companies increased from $707,494 to $19,939,096.

Because of the substitution of contingent interest charges for fixed interest charges, the reduction of fixed and contingent interest charges combined was considerably less than the reduction of fixed charges alone.

Included within the contingent interest charges is over $9,000,000 of interest on bonds issued by the Chicago, Milwaukee, St. Paul & Pacific in 1928, which, although contingent upon earnings, nevertheless became cumulative in 1930.

Relation of Fixed Charges to Earnings

The average annual income available for meeting fixed charges (Gross Income) for the ten years preceding reorganization (if figures were obtainable for such a period) is compared with the fixed charges after reorganization.

The fixed charges after reorganization ranged from 0.29 per cent of the average gross income in case of the New Orleans, Mobile and Chicago to 1166.52 per cent in case of the Missouri & North Arkansas. The Missouri, Oklahoma & Gulf had $91,341 of fixed charges when the 10-year average gross income was a deficit of $9,525.

Commissioner Eastman once suggested another measure of the sufficiency of reductions in fixed charges to be accomplished by reorganization. He suggested that the fixed charges should not exceed 80 per cent of the average earnings available for interest for the 3 worst consecutive years out of the preceding ten. Fifteen of the 31 organizations came up to the standard. The others did not.

Reduction in Current Liabilities

The financial difficulties which lead to receivership and reorganization usually result in an accumulation of current liabilities which must be cleared away in large measure by reorganization. The total current liabilities of the 31 companies prior to reorganization were $538,342,549. These were distributed among the various accounts as follows:

Item	Amount
Funded Debt Matured and Unpaid	$168,523,952
Interest Matured and Unpaid	228,159,595
Tax Liability	15,346,588
Loans and Bills Payable	20,858,729
Audited Accounts and Wages	51,353,711
Miscellaneous Accounts Payable	9,881,617
Unmatured Interest Accrued	19,716,320
Other Current Liabilities	24,502,037
Total	$538,342,549

Current liabilities were reduced by $403,019,307, or 74.86 per cent, as a result of reorganization. Some current liabilities were reduced more than others. The following table shows the aggregate and percentage reduction in various current liabilities.

Item	Decrease	Increase	Per cent increase or decrease
Funded Debt Matured and Unpaid	$165,034,136	.....	97.93
Interest Matured and Unpaid	207,450,662	.....	90.92
Tax Liability	.....	$695,481	4.53
Loans and Bills Payable	15,963,051	.....	76.53
Audited Accounts and Bills Payable	8,369,007	.....	16.30
Miscellaneous Accounts Payable	3,398,789	.....	34.40
Unmatured Interest Accrued	1,572,311	.....	7.97
Other Current Liabilities	1,926,832	.....	7.86
Total	403,714,788	695,481	....
	695,481		
Net Reduction	403,019,307		

It will be observed that Funded Debt Matured and Unpaid was nearly eliminated; Interested Matured and Unpaid was reduced by over 90 per cent and Loans and Bills Payable over 70 per cent. Reductions in other items were small, and there was a small increase in Tax Liability.

Freight Car Loading

(*Continued from page 430*)

pared with first half of the month. The total included 152,088 box cars, 52,965 coal cars, 21,116 stock cars, and 8,193 refrigerator cars.

Car Loading in Canada

Car loadings in Canada for the week ended September 21, totaling 56,018, were 1,665 cars over the previous week's loadings and 4,408 over the total for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
September 21, 1935	56,018	20,596
September 14, 1935	54,353	19,658
September 7, 1935	44,720	16,632
September 22, 1934	51,610	19,495
Cumulative Totals for Canada:		
September 21, 1935	1,660,982	801,673
September 22, 1934	1,648,663	829,664
September 23, 1933	1,400,193	694,918

A GARAGE MECHANIC who "got religion" confessed on September 28 that he caused the wreck of an Alton freight train north of Pontiac, Ill., in January, 1934. On the day of the wreck, the mechanic was extricating a truck from a ditch alongside the railroad and in the process tied a cable to the outside rail and pulled it 13 in. out of line.

Purchasing Automotive Supplies for Railroads*

Policies of large bus owner outlined and relation of supply to operating and maintenance forces expounded

By C. E. Smith

Vice President, New York, New Haven & Hartford and New England Transportation Company

THE New Haven and subsidiary and affiliated companies have a total of 1,300 automotive vehicles, operated by 10 separate operating companies, as well as 1,350 trolley cars operated by two companies, and 92 rapid transit cars in New York suburban service. The purchases for all these operations are centralized in the purchasing department of the New Haven railroad. One assistant purchasing agent, with staff assistants, devotes his entire time to automotive and trolley purchases, and to such other materials and supplies as gasolene, tires, etc., which are used principally in highway operation but are common to other operations; while other branches of the purchasing department buy materials, such as copper products, steel products, etc., which are used principally in other operations but are common to highway operations.

Function of Purchasing Department

The purchasing and stores department of any company can be merely an order and supply department—or may be a real purchasing department. Any one can order materials and voucher invoices but the purchasing and stores department owes the operating and maintenance departments much more than this. While an adequate supply is important, it is quite as important to avoid any surplus, to buy only goods proven satisfactory to the operating and maintenance departments and to protect the company's interests by securing the best obtainable prices under legitimate purchasing methods. Operations can not be conducted for the relief of distressed supply companies, but must be so conducted that the transportation companies themselves will not be distressed to the point of needing relief.

The purchasing agent has been defined by many as one who spends the day swapping snappy stories with salesmen, never buys what you want, always gets what you don't want, and never gets it when you want it, and the storekeeper as one who never has on hand what you need, insists that you take something else, and sees that you never get it. Nothing could be farther from the truth.

Each purchasing executive is bound to have a somewhat different view of purchasing policies, depending upon his particular problems. The problems of a railroad and public utility purchasing officer who buys everything from pins to locomotives, about 50,000 different items, for use and not for sale, are considerably different from those of a manufacturer's purchasing agent who buys incidentally for use but principally buys materials for manufacture and sale. The principal reason that I have been able to discover for the kind of comment referred to above is that on almost every order one successful recipient can be made happy, but usually several, and frequently many, are made unhappy.

Bids and Bidders

The purchasing and stores department can be of very considerable assistance to the operating and maintenance departments in keeping their costs down by securing the maximum competition in everything that is bought. Competition should be limited to those who have some chance of getting an order, and inquiries should not be extended to those who are definitely out of the picture. If conditions indicate definitely that an applicant for an inquiry cannot normally bid, and certainly would not get an order even though his bid were favorable, he should not be put to the unnecessary expense of becoming familiar with the requirements and preparing a bid, but should be told as diplomatically as possible just what he is up against and why it would be fruitless for him to enter into the competition. On the other hand, I favor the widest competition from those who desire an opportunity to show that they are in position to furnish goods of acceptable quality and to render the proper service at reasonable prices.

It may be assumed without argument that all purchasing officers desire to have their inquiries go out in such a way that there can be no misunderstanding, and that the first bid of each bidder is his last bid, the business to be awarded to the most favorable bidder accordingly. But it is inevitable that there will be cases when we will be disappointed in the bids, when even the low bid appears too high, and when certain bidders will require explanations and additional information. Also, in some cases, it will be quite evident from the bids submitted that some bidders have not thoroughly understood the inquiry. In such cases I can see no objection to the purchasing officer trading with the bidders toward a mutual understanding and the most favorable price. To deny the purchasing officer such an opportunity to render service to this company would substantially amount to reducing him to the status of a chief clerk to supervise the routine work of the purchasing employees.

Although, as a rule, high bidders should not be permitted to revise their bids in order to get on a more favorable basis, there will be conditions under which revised bids may be desirable and permissible. This is a matter that must be left to the judgment of the purchasing officer. I believe the purchasing officer should always be a buyer as well as an executive of his department, and that he should feel privileged to do whatever is possible to get the best results in quality, service and price for his company, without violating standards and principles of the purchasing fraternity, which consist merely of good ethics in business.

We frequently hear the question:—"Is buying below

* From a paper presented to the American Transit Association, Atlantic City, N. J., on September 25.

cost justified?" No one is going to buy below cost continually, because no one can continually sell below cost and stay in business. However, there are many instances in which buying below cost will be desirable and necessary to relieve distress of a friendly company which finds itself overloaded with goods. No buyer would be justified in paying more for goods than current prices, regardless of what they might have cost the seller on account of his having produced them from goods purchased at higher prices.

We cannot be mentors and keepers of our supply sources. Neither can we supervise their costs of production. On the other hand, we should strive to keep them on a healthy basis by willingly paying fair prices that will yield fair profits under normal conditions. But I believe in the last analysis that we must accept the most favorable bids or try to do business with the realization that lower prices will be available to our competitors. Here again we have a condition to deal with and not a theory, but in the practical application of this principle we should strive to avoid receiving and accepting unreasonably depressed bids that are made merely for the purpose of keeping a competitor from selling to us.

Auto Parts and Old Buses

The rapid increase in the use of automotive vehicles and the rapid changes in design—one model superseding another with lightning-like rapidity—has brought new problems to the purchasing and stores department, not only in buying new and comparatively unproven vehicles, but in buying and supplying parts for their maintenance. The purchasing of repair parts affords a wonderful opportunity for the purchasing and stores department to save money for the company. It will be found best in the long run to rely to the maximum extent practicable on local agencies of manufacturers to deliver repair parts quickly when needed, although as to certain items, it will be found necessary to have on hand those parts that are used currently. A combination of the two will be found best for all concerned. There is opportunity here for wide discretion, the exercise of which will mean much in money.

Whether such repair parts will be purchased from original manufacturers of equipment or competitors who specialize on such parts presents a real problem. Here again the answer will be found in purchasing certain items from the original manufacturer, while considerable economy can be realized by purchasing other items from competitors who specialize on such parts.

The stock of spare parts should be kept at a minimum consistent with keeping mechanics at work and keeping equipment available for service, but it is occasionally better to delay a mechanic for a short time, waiting for a repair part, than to keep a large investment in such parts to avoid an occasional delay. The stores department in particular should always bear in mind that much rail equipment and all motorbus equipment is changing rapidly, that old buses are being or should be retired, and left-over parts of such equipment must be charged to operating expenses, just as though used in service. Reducing this burden to a minimum will be helpful to the operating and maintenance departments.

One feature that has been sadly overlooked by many companies and is of great importance to those who have large numbers of buses and other equipment of various models, series and ages, is the necessity of keeping separate maintenance and operating costs of the different units or groups of units, so that these costs may be compared with comparable costs of more modern units. The purchasing department can be of considerable assistance in this respect by keeping the operating and maintenance departments advised of the most up-to-date figures of new equipment available for comparison with the actual realized costs of old equipment, and the stores department can assist by keeping segregated the issue of materials by series or models of vehicles.

Another very important feature, respecting which the purchasing and stores department can co-operate with the operating and maintenance departments, particularly the operating department, is not to sell used buses to second-hand dealers. It has happened on more than one occasion that such buses have been placed in competition with the selling company by some individual or company that is enabled, because of the small investment in such buses, to compete in subsequent sales and thus keep down the revenue the selling company might otherwise receive. The better plan is to anticipate the retirement of any series of buses to permit the older and more worn buses to be drawn on for repair parts for buses of the same series, until they are scrapped.

Buying Ahead

The purchasing department can be of considerable assistance in keeping down the costs of operation and maintenance by keeping informed of price trends in all commodities, and, when price increases appear imminent, by prudently contracting ahead for commodities for which large sums are spent and the prices of which are subject to change, such as coal, tires, gasoline, oil, etc. Speculative buying by the purchasing officer is never justifiable or permissible, but where the purchasing officer has available a source of supply for a commodity that he feels is going to increase in price, he would be derelict in his duty if he did not present the problem to his executives. But in the last analysis no expenditure should be made for speculating in materials except after careful consideration of all interested.

An exception may be made in cases where a steady, reliable source of supply gives notice to a steady customer that a price increase is pending and is going to be effective on a certain day. In such cases the purchasing officer should make his commitments in such a way as to take advantage of current prices before the increase takes place, and he should reasonably anticipate his requirements in making the commitment at the lower price. I would not interpret buying increased purchases to secure quantity differentials as speculative, because I believe the purchaser is entitled to the decreased costs of quantity production if by temporarily anticipating his demands he can increase his purchases.

The purchasing and stores department should also keep in close touch with the operating and maintenance departments with a view of learning the quality and service of materials purchased, in order that the purchasing department may know when orders are placed that the company is going to get the most for its money. This may seem to be a simple matter, but it is not. It requires constant checking and rechecking by all concerned.

Standard Brands

Whenever possible, materials should be purchased on specifications, but, unfortunately, regardless of all our technical knowledge, it is not always possible or practicable to describe on paper or plans the quality and service expected of materials. Here trade names and reputations of standard brands of reliable manufacturers will in many cases be preferable to purchasing on specifications. Naturally many items will fall within the class that can be purchased better on standard specifications. But, regardless of all efforts in that direction,

there will be many items that can be purchased better without specifications. Of course the consumer should develop his own specifications to keep producers from preparing specifications that practically specify their own products by description if not by name. But there will be many cases where a specification prepared by a producer will be entirely satisfactory.

Performance specifications are to be preferred in some cases to descriptions of the materials and methods to be used in production, but not in all cases. I also believe that in soliciting competitive bids trademarks and branded materials should not be referred to by name. It is unfair to those companies who have spent large sums in developing and advertising branded products and standard goods to request their competitors to bid on such products or their equivalent.

In normal or busy times we hear little about the so-called price buyer, which means, I presume, the purchasing officer who seeks to pay the lowest price for the goods he buys. But in times of depression, which we used to call "hard times," much criticism is heard. This is merely a natural reaction to more active competition. At times like this we frequently hear that purchasing officers should fix fair prices and buy without competition from reliable firms. I could not subscribe to such a policy. The seller is better able to fix his own prices than is the buyer. Usually the buyer is not an altruist or a philanthropist, but a keen business man who must make the best deal he can for the owners of the company he represents.

In fixing his policies the purchasing officer must continually exercise wide discretion, but in all his dealings his policies must be above reproach. He must conduct all his dealings in such a way that not only will he be honest and fair, but so that he will be believed to be honest and fair.

Progress in Crossing Program

WASHINGTON, D. C.

CONSIDERABLY greater progress than has been indicated by announcements so far is being made in the grade crossing elimination program undertaken by the federal government under the $4,000,000,000 emergency relief appropriation act of April 8. Complete or partial grade crossing programs of 22 states, including 450 projects for which a total of $45,045,608 has been allotted, or approximately 22.5 per cent of the $200,000,000 fund which had been apportioned to the states for this purpose under the work-relief program, have now been acted upon and are in position to be or are being contracted for, according to Thomas H. MacDonald, chief of the Bureau of Public Roads. Many contracts have already been awarded and the full program of $200,000,000 will be carried on as rapidly as it can be contracted for. It is now expected that the major part of the program will have been approved in about 30 days. The programs already approved represent 20,056 man-years of employment.

Four states in the list, Illinois, Michigan, Rhode Island and Vermont, have submitted programs covering 100 per cent of their apportionment of the $200,000,000 fund, which have been approved, while in other states the projects submitted and acted upon represent from 25 to 84 per cent of the apportionment. Completion of the remaining portions of these programs, as well as those of other states, is expected to be materially hastened as a result of several fundamental changes in the rules and regulations issued on August 29, which remove many restrictive requirements regarding the employment of labor and the percentage of labor cost to the total.

The status of approvals of state programs up to September 25 is shown in the accompanying table, and several other states have submitted programs not yet acted upon at that date.

Under the rules and regulations applicable to the grade crossing program promulgated by the Secretary of Agriculture and approved by the President on July 12, the grade crossing projects originate with the state highway departments. These submit their programs in parcels of not less than 25 per cent of the whole state program to the district engineer of the Bureau of Public Roads for examination and review. If satisfactory to him the program is then laid before the state administrator of the Works Progress Administration and the state director of the National Emergency Council for their concurrence in a recommendation for approval before the district engineer submits it to the Bureau of Public Roads at Washington for final action.

Status of U. S. Works Program Grade Crossing Projects Provided by Act of April 6, 1935, as of September 25, 1935

State	No. of projects	W. P. Funds	Per cent of appor.	Man-years
Alabama	14	$1,342,010	33.3	746
District of Columbia	1	220,000	53.6	93
Florida	11	1,084,000	38.3	734
Idaho	4	420,000	25.0	155
Illinois	76	10,307,184	100.0	3,144
Indiana	22	2,985,000	58.4	1,583
Iowa	76	4,710,000	84.1	1,923
Kentucky	28	2,968,625	80.8	1,552
Massachusetts	4	1,270,000	30.2	315
Michigan[1]	41	6,765,197	100.0	4,362
Michigan	44	6,762,700	100.0	3,885
Mississippi	9	835,450	25.8	597
Montana	10	723,000	26.5	243
N. Carolina	21	1,579,000	32.7	777
Nebraska	19	1,128,000	31.7	362
Oregon	12	1,624,791	69.6	520
Rhode Island	5	699,691	100.0	244
S. Dakota	42	1,397,000	43.1	895
Utah	3	308,000	25.0	106
Vermont	14	729,857	100.0	477
Washington	14	1,382,300	44.6	516
Wisconsin	16	2,141,000	42.6	1,020
Wyoming	5	428,000	31.4	169
Total all programs	450	$45,045,608	22.5	20,056

Projects of a high order of priority with respect to providing employment and eliminating hazards, and conforming to the rules and regulations to the extent of a reasonable percentage of the work permissible under the different classifications of projects may be approved by the district engineer for construction upon the submission of a project statement and satisfactory plans prior to formal action on a detailed program submitted by any state provided clearance is obtained on such projects from the state director of the National Emergency Council and the state administrator of the Works Progress Administration.

The rules and regulations also provide that a definite agreement between the state highway department and the affected railroad company shall be entered into respecting the maintenance of such installations and that no federal funds shall be paid for any installation until such agreement has been filed. The practice governing such agreements is in many instances governed by state laws but the general practice is that the states agree to maintain the roadway and structures over railroad tracks and that the railroads maintain structures that carry their tracks over highways. In each case the question is settled when the agreement is made between the state authorities and the railroad which precedes the initiation of a project.

NEWS

More Parts of Motor Carrier Act Postponed

I. C. C. extends, to October 15, effective date of certificate and permit sections

After having postponed until December 1 the effective date of the sections of the motor carrier act, 1935, that deal with the filing and observance of tariffs and schedules showing rates, fares, and charges, and related matters, the Interstate Commerce Commission, by Division 5, on September 30 entered an additional order extending from October 1 to October 15 the effective date of Sections 206, 207, 208, 209, and 211 of the act. These sections deal with the filing of applications for certificates for common carriers, permits for contract carriers, licenses for transportation brokers, and the issuance thereof.

It was explained that this postponement had been made so that those in all parts of the country who desire to file applications for certificates, permits, and licenses may have available to them appropriate printed forms prior to the effective date of these sections. The commission had hoped to have these forms ready for distribution prior to October 1 but because of the delays experienced in setting up an organization to administer the act they were not ready in time for distribution to all parts of the country.

The previous postponement applied to Sections 216, 217, 218, 219, and 223.

The order was issued by Division 5 of the commission, consisting of Commissioners Eastman, Caskie, and Lee, which in a reorganization of the commission's divisions has succeeded Division 7.

The commission has been greatly delayed in its organization for the purpose of administering the new law by the failure of Congress to pass the bill carrying an appropriation of $1,250,000 for the work but the Bureau of the Budget has finally authorized it to use $525,000 out of its general appropriation for the period up to February 1, which will allow time for Congress to make a deficiency appropriation to replace that amount and a regular appropriation for the work of the Bureau of Motor Carriers.

This money became available on October 1 and the Bureau of Motor Carriers has been engaged this week in completing its organization. Some changes have been made from the form tentatively announced some time ago but there will be 16 district offices, for the purpose of "taking the law to the motor carriers" instead of requiring them to go to Washington, and a central organization of nine sections, dealing with certificates, finance, accounting, traffic, statistics, research, formal cases, safety, and legal matters. The forms on which applications are to be made are expected to be ready for the printer before the end of the week and meanwhile the bureau is attempting to build up its mailing list from the various available sources.

Van Sweringens Keep Control of Alleghany Corp.

At the auction sale by J. P. Morgan & Co. and other bankers in New York on September 30 of collateral securing an unpaid loan to the Van Sweringen interests totaling (with interest) approximately $50,000,000, the Midamerica Corporation, organized last week in Ohio, was the successful bidder for the block of 2,054,492 shares of common stock of the Alleghany Corporation, which dominates that company and carries working control of the Chesapeake & Ohio, the Erie, the Pere Marquette, the Nickel Plate, the Missouri Pacific and other Van Sweringen railway properties. The successful bidder is dominated by individuals closely associated with the Messrs. Van Sweringen; hence the result of the sale involves no change in the control of the railway properties involved. The bidding on behalf of the Midamerica Corporation was done by Col. Leonard P. Ayres, vice-president of the Cleveland Trust Company.

The amount bid by the Midamerica Corporation for the shares of Alleghany Corporation common, and also smaller blocks of preferred of the same corporation and of Cleveland Railway common totaled $3,121,000. For other blocks of collateral involved in the sale (mostly those of industrial concerns) the successful bidder was the Stock Exchange firm of Hallgarten & Co., its bids totaling $1,582,000. Thus the bankers received $4,703,000 for securities the market value of which was something over $7,500,000; and which comprised the collateral protecting an indebtedness to them of some $50,000,000.

Milwaukee Returns to Consolidated Ticket Office

The Chicago, Milwaukee, St. Paul & Pacific, on September 30, returned to the Consolidated Ticket Office at Chicago, abandoning its office at Clark and Monroe streets, which was established on May 1, 1927.

New York Central Enters Alliance with Greyhound

Eastern Greyhound Lines to become Central Greyhound Lines—Wide co-ordination planned

The New York Central has entered an agreement with the Greyhound Corporation whereby co-ordinated rail and highway services will be promoted in the Chicago-New York and Albany, N. Y.-Boston, Mass., territories served by that road's railway lines. The New York Central's tie-up with Greyhound will be similar to that of the Pennsylvania, the Richmond, Fredericksburg & Potomac and other roads; it will acquire an interest in the Eastern Greyhound Lines, which will be renamed the Central Greyhound Lines.

The co-ordinated plan was announced by the New York Central in a statement issued on September 28. This statement follows in part:

"The purpose of the transaction is to bring about co-ordination of rail and bus service in the territory of the New York Central and to effect improvements in service and economies in operation through the joint use of facilities.

"This arrangement between these two important transportation agencies will make available to the traveling public many privileges and advantages that have not heretofore been possible.

"In the future, both the New York Central and Central Greyhound Lines will co-ordinate their traffic interests with the idea of offering land transportation service to all types of travelers. One of the most important results from the alliance will be in respect to service to outlying points on branch lines, i. e., the ability to provide transportation facilities that are more flexible and better adapted to the modern needs of these communities.

"The New York Central System's total of almost 12,000 route miles and the 5,000 contained in the Central Greyhound Lines offer complete rail and highway transportation in New York, Massachusetts, northern Pennsylvania, southern Ontario, Ohio, Michigan, Indiana, and parts of Illinois."

Western Railway Club Meeting

The first fall meeting of the Western Railway Club will be held on Monday evening, October 21, at the Hotel Sherman, Chicago. H. G. Taylor, Chairman, Western Association of Railway Executives, will address the club on the subject of "Train Schedules." A special "Murphy" dinner will be served at 6:30 p.m.

Railway Net for 8 Months a Return of 1.66 Per Cent

$263,738,184 compares with $302,872,358 or 1.89 per cent in same period last year

Class I railroads for the first eight months of 1935 had a net railway operating income of $263,738,184 which was at the annual rate of return of 1.66 per cent on their property investment, according to reports filed by the carriers with the Bureau of Railway Economics. In the first eight months of 1934, their net railway operating income was $302,872,358, or 1.89 per cent. Operating revenues for the first eight months of 1935 totaled $2,204,961,212 compared with $2,188,633,354 for the same period in 1934, an increase of 0.7 per cent. Operating expenses amounted to $1,698,631,063, compared with $1,631,865,537 for the same period in 1934, an increase of 4.1 per cent.

Class I railroads in the first eight months of 1935 paid $162,731,192 in taxes compared with $168,201,456 in the same period in 1934 or a reduction of 3.3 per cent. For the month of August alone, the tax bill amounted to $20,658,180, an increase of $289,066 or 1.4 per cent over August, 1934.

Thirty-six Class I railroads failed to earn expenses and taxes in the first eight months of 1935, of which 8 were in the Eastern district, 8 in the Southern and 20 in the Western.

Class I railroads for August had a net railway operating income of $42,073,256, which, for that month, was at the annual rate of 1.48 per cent. In August, 1934, their net was $40,564,075, or 1.42 per cent. Operating revenues for August amounted to $294,017,777, compared with $282,726,349 in August, 1934, an increase of 4 per cent. Operating expenses totaled $221,237,698, compared with $211,085,589 in the same month in 1934, or an increase of 4.8 per cent.

Class I railroads in the Eastern district for eight months had a net of $181,471,273, at the rate of 2.31 per cent. For the same period in 1934, their net was $185,741,172, or 2.37 per cent. Operating revenues in the Eastern district for eight months totaled $1,133,050,157, an increase of five-tenths of one per cent, compared with 1934, while operating expenses totaled $830,357,275, an increase of 2 per cent. Railroads in the Eastern district for August had a net of $22,354,981, compared with $18,979,929 in August, 1934.

Class I railroads in the Southern district for eight months had a net of $29,671,030, at the rate of 1.45 per cent. For the same period in 1934, their net amounted to $36,522,317, at the rate of 1.76 per cent. Operating revenues in the Southern district for eight months amounted to $278,592,970, an increase of 1.4 per cent compared with the same period in 1934, while operating expenses totaled $222,613,004, an increase of 5.9 per cent. Railroads in the Southern district for August had a net of $3,242,839, compared with $2,910,172 in August, 1934.

Class I railroads in the Western district for eight months had a net of $52,595,881, at the rate of 0.87 per cent. For the same eight months in 1934 they had a net of $80,608,869, at the rate of 1.32 per cent. Operating revenues in the Western district for eight months amounted to $793,318,085, an increase of 0.9 per cent above the same period in 1934, while operating expenses totaled $645,660,784, an increase of 6.3 per cent. For August the railroads in the Western district reported a net of $16,475,436, compared with $18,673,970 for the same roads in August, 1934.

Class I Railroads—United States

	1935	1934	Per Cent of Increase
Month of August			
Total operating revenues	$294,017,777	$282,726,349	4.0
Total operating expenses	221,237,698	211,085,589	4.8
Taxes	20,658,180	20,369,114	1.4
Net railway operating income	42,073,256	40,564,071	3.7
Operating ratio—per cent	72.25	74.66	
Rate of return on property investment	1.48%	1.42%	
Eight months ended August 31			Per Cent of Increase
	1935	1934	
Total operating revenues	$2,204,961,212	$2,188,633,354	0.7
Total operating expenses	1,698,631,063	1,631,865,537	4.1
Taxes	162,731,192	168,201,456	3.3 Dec.
Net railway operating income	263,738,184	302,872,358	12.9 Dec.
Operating ratio—per cent	77.04	74.56	
Rate of return on property investment	1.66%	1.89%	

Dec.=Decrease.

Illinois Chamber of Commerce Transportation Luncheon

The transportation luncheon given yearly in connection with the annual meeting of the Illinois Chamber of Commerce will be held in the grand ballroom of the Hotel Sherman, Chicago, on October 10, the speaker being Fitzgerald Hall, president of the Nashville, Chattanooga & St. Louis, whose subject will be Transportation Versus Politics.

C. C. Williams Elected President of Lehigh University

Clement C. Williams, dean of the College of Engineering of the University of Iowa, has been elected president of Lehigh University to succeed Dr. Charles R. Richards, who has resigned. Prior to becoming head of the College of Engineering of the University of Iowa in 1926, Prof. Williams had served as head of the civil engineering department of the University of Illinois for four years and as professor of railroad and civil engineering at the University of Kansas for eight years.

Co-operation of Coal and Railway Industries Urged

President L. A. Downs of the Illinois Central sees need for joint protective efforts

Co-operation for the protection of joint investments in mining, transportation and retailing properties was urged by L. A. Downs, president of the Illinois Central, at a meeting of the American Bituminous Retail Association in Chicago on September 30. As an example of the close association between the railroads and the coal industry, he showed that there is an investment of nearly $300,000,000 in the coal business along the Illinois Central alone, this investment including more than $100,000,000 in coal deposits, workings, machinery and surface facilities of 130 coal mines; more than $10,000,000 in land and improvements, including storage facilities, scales and offices of retail yards; and more than $180,000,000 by the railroad itself in cars, locomotives, tracks and other facilities.

The greatest menace to the investments which established retailers have made in physical facilities and in the accounts on their books is the trucking of coal, according to Mr. Downs. "The truck operator," he said, "does not have such an investment. His place of business is often in his hat, and he has nothing tied up in land and improvements and accounts. His only investment is in a truck, and often even that is of little value. He also is relieved of having to make any investment in roadway facilities, as the established carriers do. By reason of these exemptions, he is often able to undermine established business, and when he skims the cream off the business in one locality he can pick up and move to another.

"This menace is not alone to the established retailer and the established carrier, but has its wider social consequences as well. When local business is destroyed, an important source of tax revenue is lost. It takes just as much money to run the schools and to provide police and fire protection and even more to keep the streets in repair, with the result that every taxpayer who has anything left to pay taxes on has to pay more taxes.

"Heretofore such operations have been almost wholly unregulated. We now have a national law for truck regulation. However, the enactment of this law is only the beginning of the movement to bring order into the chaotic condition which has been allowed to develop in this country in respect to transportation. Water carriers remain to be brought under comparable regulation. The laws will need to be strengthened from time to time in the light of experience. Above all, there is the burden of enforcement, and the extent of enforcement will depend upon local demand."

200 Passengers Killed in China

Loyang, Honan Province, is given, in a dispatch from Shanghai, September 24, as the location of a disastrous railroad wreck on that day. The train was loaded with soldiers, and it was estimated that 200 were killed and as many injured.

I.C.C. Reorganizes; Now Has Only Five Divisions

Functions rearranged to provide for the administration of the motor carrier act

In connection with a rearrangement of its functions to provide for the administration of the motor carrier act, 1935, which is also part II of the interstate commerce act, the Interstate Commerce Commission has effected a reorganization into five divisions of commissioners, in place of the six which it formerly had and a seventh which had recently been organized for the motor carrier work. There are now three rate divisions instead of four and in effect Division 6, which handled operating matters, such as safety, locomotive inspection and service, has been consolidated with Division 3, while Division 5 takes the place of the new Division 7 and to it have been assigned the work and functions arising under the new law.

The respective divisions are charged with the following duties:

Division 1, Commissioners Meyer, Aitchison and Lee: The conduct of the work of the Bureau of Valuation.

Division 2, Commissioners Aitchison, Tate and Splawn: Applications and requests for suspension under Section 15 (7); matters arising under Section 25 (1); and applications under Sections 4 and 6 of the Interstate Commerce Act; released rate applications; and Board of Reference matters; Docket No. 10122 (Standard Time Zone Investigation); Ex Parte No. 73 (Regulations as to the Extension of Credit for Transportation Charges); and matters coming from the Bureau of Informal Cases; matters arising with respect to reduced rates in case of calamitous visitation under Section 22 (1) of the Interstate Commerce Act and acts supplemental thereto alternatively with the Commissioner to whom the Bureau of Traffic reports; equally with Divisions 3 and 4, Reviewing Section cases not set to be orally argued and cases heard under the shortened procedure; and cases set to be argued during October, 1935, and January, April, July and December, 1936.*

Division 3, Commissioners McManamy, Miller and Porter, alternating with Mahaffie: Matters arising under Section 1 (9) to (17), inclusive, and (21); Section 3 (4); Section 6 (13) (a); Section 15 (10); and Section 26 of the Interstate Commerce Act; formal complaints seeking construction of new roads or procurement of additional facilities; matters relating to the transportation of explosives and other dangerous articles; matters relating to efficiency and economy of operation; orders arising out of the Railway Labor Act of May 20, 1926, as amended; the Safety Appliance, Accident Reports, Hours of Service, Ash Pan, Boiler Inspection, and Medals of Honor Acts, Block Signal Resolution, Railroad Retirement Act of 1935, and the Act of August 29, 1935, to levy an excise tax upon carriers and an income tax upon their employees, and for other purposes; Docket No. 9200 (Railway Mail Pay); matters arising under the Air Mail Act of June 12, 1934, as amended; and equally with Divisions 2 and 4, Reviewing Section cases not set to be orally argued and cases heard under the shortened procedure; and all cases set to be argued during November, 1935, and February, May and October, 1936.*

Division 4, Commissioners Meyer, Porter and Mahaffie: Matters arising under Sections 204, 209, and 210 of the Transportation Act, 1920; Section 1 (18) to (20), inclusive; Section 5 (4) to (17), inclusive; Section 20 (1) to (10), inclusive (other than the enforcement of penalties); and Section 20 (a) of the Interstate Commerce Act; I. & S. Docket No. 11 (Tap Line Case); matters arising under Inland Waterways Corporation Act as amended; Bureau of Inquiry matters; matters arising under Section 77 of the Uniform Bankruptcy Act, as amended; and matters arising under administration of Reconstruction Finance Corporation Act and Section 201 of Title II of the Emergency Relief and Construction Act of 1932, as amended; and matters arising under Section 203 (a) (4) of Title II of the National Industrial Recovery Act; and equally with Divisions 2 and 3, Reviewing Section cases not set to be orally argued and cases heard under the shortened procedure; and all cases set to be argued during December, 1935, and March, June, and November, 1936.*

Division 5, Commissioners Eastman, Caskie and Lee: Matters arising under the Motor Carrier Act, 1935.

* Except cases for argument before the whole commission or assigned to another Division.

New England Shippers' Board

The New England Shippers' Advisory Board held its regular meeting at Hartford, Conn., on September 26 and 27. Four lines of business are anticipating a decrease in freight movement this quarter, but all other industries in New England expect increases, the total average being about three per cent over last year. The meeting was addressed by W. H. Price, of the J. B. Williams Company, comparing rail rates and motor truck rates, and by W. H. Day, of the Boston Chamber of Commerce, telling of the need of combating unfair proposals for legislation in the next Congress.

International Acetylene Association Convention

Welding and cutting of high tensile medium alloy steels; studies of oxyacetylene cut steel plate; hydrocarbon fuel gases for cutting; high-pressure piping; welding class 1 pressure vessels; maintenance of way problems in high-speed transportation; shape cutting of locomotive and car parts; gas welding of aluminum and its alloys, and the safe handling, storage and return of compressed gas containers are among the topics for discussion at the 1935 convention of the International Acetylene Association which will be held at the Hotel Cleveland, Cleveland, Ohio, November 12, 13, 14 and 15. Details regarding the convention may be obtained from V. H. Van Diver, Technical Publicity Department, Union Carbide Company, 205 East Forty-Second street, New York.

Railroads Seeking Only Fair Deal, Says Fletcher

A.A.R. general counsel cites carriers' important role in country's economic system

Rail transportation bears an importance in the economic system of this country unequaled by any other form of transportation and is entitled to fair and equal treatment with its competitors, said R. V. Fletcher, general counsel of the Association of American Railroads, in an address before the Executives' Club of Chicago on September 27. Not only do the railroads furnish the cheapest form of transportation, but their importance as a means of investment, as a purchaser of goods, and employer of labor, and as a taxpaying citizen, cannot be ignored when it comes to the co-ordination of transportation.

"No one who occupies any position of responsibility in the railroad world," Mr. Fletcher continued, "has ever been heard in advocacy of any policy which would give the railroads anything beyond a fair and equal opportunity to demonstrate their value in a properly organized and rational economic order, conducted along lines of fairness and sanity. The railroads are not asking for subsidies or exemption from their fair proportion of the expense of government, or special favors of any kind by which they will become the wards of the nation, entitled to preferential treatment. They are not insisting that they shall be furnished with highways, constructed at public expense, so that they may be thereby relieved from the burden of heavy capital expenditures. Nor are they asking that they be given the privilege, accorded to their active competitor, the Government Inland Waterways Corporation, of calling upon the burdened taxpayers of the country to absorb their operating deficits, amounting, in the case of the Federal Barge Line, to more than $900,000 in 1934. On the contrary, the railroads are doing no more than to proclaim their rights to fair and equal treatment before the law, so that opportunity may be offered by the American people to determine by actual experimentation just what is the place of the railroads in a transportation system, operated with due regard to all elements of costs, by whomsoever these costs are paid."

Referring to the Federal Barge Line, Mr. Fletcher said that the corporation throughout the 17 years of its existence "as a laboratory subject" has cost the taxpayers $5,000,000 in operating deficits, despite the fact that the corporation pays no taxes, has no obligation to pay a return on capital, enjoys the franking privilege, as well as interest upon inactive capital appropriated from the federal treasury. "No greater service could be done," he said, "than to abolish this grotesque and expensive experiment."

The recent session of Congress did enact legislation for the federal regulation of motor carriers, said Mr. Fletcher, who added that the next step so far as federal action is concerned should be the regulation by the Interstate Commerce Commis-

sion of the rates and practices of such water lines as are engaged in commercial hauling. "I believe," he continued, "the common sense of the American people will endorse the principle of fair play in the interest of justice and good order in the field of transportation and that this salutary reform will follow at no distant date."

Mr. Fletcher said that in 1933 the railroads paid eight cents in taxes out of every dollar of gross revenue and quoted from a report made by the Federal Co-ordinator of Transportation which showed that taxes laid upon the railways are relatively much heavier than on any other form of transportation, constituting about 8 per cent of their total revenue and 10 per cent of their cost. With water carriers of all types, according to the report, the average was less than one per cent, while for highway carriers it varied from two to four per cent, depending upon the length of haul.

"Sooner or later," said Mr. Fletcher, "in accord with an inexorable economic law which tyros and charlatans vainly strive to disregard, the people of this country will select the form of transportation which best serves their purposes. But in making the selection they cannot ignore the importance of the railroad as a means of investment, a purchaser of goods, an employer of labor and a taxpaying citizen."

Freight Robberies Diminished

The payments by railroad freight claim departments for stolen goods in the first six months of this year amounted to $492,256, which is 17.4 per cent less than in the corresponding period last year. The figures, made public by the Protective Section, A.A.R., show that nearly 40 per cent of this amount was paid on account of thefts of coal; and cigarettes and tobacco accounted for 18 per cent.

Club Meetings

The Car Foremen's Association of Chicago will hold its next meeting at LaSalle Hotel, Chicago, on Monday evening, October 14. This will be the annual installation of officers, with a social meeting.

The Canadian Railway Club will hold its next meeting at the Windsor Hotel, Montreal, on Monday evening, October 21. David de Waal Meyer, trade commissioner of South Africa, will speak on railway transportation in South Africa. There will be sound pictures, made in a trip through the Panama Canal.

N. Y. C. Gives Send-Off to Expedited Twentieth Century Limited

Frederick E. Williamson, president of the New York Central, started the Twentieth Century Limited when it left Grand Central Terminal at 5:30 p.m., September 29, on its first trip between New York and Chicago on the new 16½ hour schedule. Miss Doris Roosa, 16½ year-old daughter of J. D. Roosa, the New York Central's chief of police, gave the starting signal, and the departure was also featured by music and special lights and decorations. The Grand Central Terminal Red Caps orchestra played while the passengers were embarking and the departing travelers walked down the Century's carpet through rows of flowers and plants that lined both sides of the entrance to the train platform.

L. W. Landman, general passenger traffic manager of the road, stated that during the five months in which the Twentieth Century was operating on its 17-hour schedule the train covered the 961 miles between New York and Chicago with an on-time record of 99.9 per cent.

New Operation Proposed on Columbia and Snake Rivers

The Inland Navigation Company has applied to the Interstate Commerce Commission for authority to extend its operations to ports on the Columbia and Snake rivers to tap the freight traffic moving from the "inland empire" to the Pacific coast ports of Portland and Vancouver. It has also asked the commission to establish through routes and joint rates. The application says that approximately 12,000,000 tons of freight are now moving by rail between these points and that about 1,000,000 tons could be shipped more economically by water.

B. & M. Low-Fair Experiment

In another move to meet the competition of highway carriers and private automobiles, the Boston & Maine on October 1 commenced the sale at a limited number of stations of round-trip tickets at rates equal to the one-way fare plus one cent. These "one cent sales" were inaugurated for tickets in both directions between Boston, Mass., and the larger communities of B. & M. lines in the surrounding area.

The plan, according to a statement of John W. Rimmer, B. & M. vice-president in charge of traffic, is designed "to attract to the rails a considerable amount of new traffic now traveling over the highways. We shall watch the experiment closely and at the end of a period hope to be able to determine whether the public would rather ride comfortably and safely on fast-moving trains or whether they prefer to continue to brave highway delays and dangers, especially in the winter months when roads are icy.

"Whether the plan will be extended to other points on the Boston & Maine system will, of course, depend on the results where we shall start it. This particular territory was selected for the tryout of the one-cent plan because of the large amount of prospective traffic there."

British Streamlined Steam Train Averages 70.4 M.P.H. for 232 Miles

The London & North Eastern of Great Britain introduced on September 30 its new streamlined steam train—the Silver Jubilee—which is scheduled to make the 268-mi. run between King's Cross (London) and Newcastle, with a stop at Darlington, in four hours. The average rate of speed for the entire run in each direction is 67.07 m.p.h. but the 232-mile run between King's Cross and Darlington is covered in 198 minutes or at 70.4 m.p.h., which the Railway Gazette (London) calls "the fastest scheduled start-to-stop run in the world for a distance of over 200 miles."

Newspaper dispatches from London on September 28 stated that the Silver Jubilee, on its September 27 trial run from King's Cross to Grantham, attained a maximum speed of 112 m.p.h. and covered this 105.5-mile run at an average speed of 104.9 m.p.h.

The Silver Jubilee, so named to commemorate the twenty-fifth year of King George's reign, consists of a streamlined

Globe Photo

The Silver Link, Streamlined Steam Locomotive on the London & North Eastern's Silver Jubilee

steam locomotive (the Silver Link) and three articulated units—one with three body sections and the others with two each. One of the two-body units houses the front-end brake equipment and accommodations for first-class passengers while the other houses the rear-end brake equipment and accommodations for third-class passengers. The three-body unit, placed in the center of the train, includes a first class dining car, a kitchen car and a third class diner.

Associated Traffic Clubs Meeting

The fourteenth annual convention of the Associated Traffic Clubs of America will be held at Indianapolis, Ind., on October 15-16. Besides the reports of various committees, the program will include a number of speakers of nation-wide reputation and subjects of national and timely importance. H. A. Wheeler, president of the Railway Business Association, will speak on "Government Ownership—What Must We Do to Be Saved;" and Luther M. Walter of Walter, Burchmore & Belnap, attorneys, will talk on "What Is the Public Interest in Transportation Regulation."

R. and L. H. Society

Charles Frederick Carter will be the guest speaker at the first fall meeting of the New York Chapter, Railway and Locomotive Historical Society, Inc., which will be held in room 1101, 29 West Thirty-ninth street, New York, at 7:30 p.m., October 11. Mr. Carter, who is the author of "When Railroads Were New," will speak on "Some Vagaries of Locomotive Development."

On October 6 members of the New York and Boston, Mass., chapters of the society will make a joint inspection trip to facilities and equipment of the New York, New Haven & Hartford at New Haven, Conn. This trip has been arranged by Sidney Withington, electrical engineer of the New Haven and vice-president of the Society.

Great Lakes Shippers' Board

The Great Lakes Shippers' Regional Advisory Board held its regular meeting at Detroit, on September 25, with an attendance of about 300. The expected increase in freight movement in that territory in the current quarter is 31.3 per cent, which, however, is composed of items from 7 per cent to 154.9 per cent, the latter being the report of the committee on automobiles. The expected movement of automobiles and parts this year is 92,361 cars. This large increase is due mainly to the fact that automobile shows this year are to be held in November. The expected increase in iron and steel is 8.2 per cent; brick and clay 20 per cent; lime and plaster 21.2 per cent; paper 7 per cent. The meeting was addressed by Col. R. S. Henry, assistant to the president of the Association of American Railroads.

Pacific Coast Business Up 62 Per Cent

Passenger business to the Pacific Coast this year, based on tickets validated at major cities in California, Oregon and Washington, was 62 per cent greater than last year. The major gains were made in the intermediate and coach class of travel. Intermediate or tourist sleeping car business was 100 per cent ahead of 1934, while coach business was about 75 per cent greater. California with the World's Fair at San Diego as an attraction and low cost all-expense tours featured by various railroads showed the major gains, with validations up 90 per cent at San Francisco and 64 per cent at Los Angeles. Business to other points in California, including San Diego, was 78 per cent ahead. Total validations at Pacific Coast points from May 15 through August 31 were 52,294, as compared with 32,168 in 1934.

Western Roads to Reduce Fares for Christmas and New Year's Season

Railroads in the Western and Southwestern Passenger associations will place reduced round-trip fares in effect between December 12 and January 1, with a return trip limit extending to January 31. These reduced round-trip fares will be on the basis of 2 cents a mile in each direction for tickets good in all classes of equipment and 1½ cents a mile for tickets good in day coaches only. The low rates are introduced to determine whether they will be more effective in stimulating travel than the present rates of 3, 2½, 2 and 1.8 cents which have been in effect since December, 1933. In the first half of this year, the volume of business was greater than in any year since 1931, showing increases of 9 per cent over 1932, 35 per cent over 1933 and 10 per cent over 1934.

Burlington Transportation Company Extends Service

The Burlington Transportation Company on September 28 established daily motor coach service between Salt Lake City, Utah, and San Francisco, Cal. Motor coaches leave St. Louis, Mo., at 1:30 p.m. and arrive in San Francisco at 1 p.m. the next afternoon, while returning they leave San Francisco at 10:30 a.m. and arrive in Salt Lake City at 12:35 p.m. the next afternoon. Motor coaches used in this 769-mile run are streamlined coaches recently purchased by the company.

On September 30, this company likewise established interstate service between St. Joseph, Mo., and Kansas City, to serve as a continuation of its Omaha-St. Joseph service. Motor coaches leave St. Joseph at 1 p.m. and 9:30 p.m. and arrive in Kansas City at 2:50 p.m. and 11:20 p.m. Returning, they leave Kansas City at 7 a.m. and 4 p.m. and arrive in St. Joseph at 8:50 a.m. and 5:50 p.m.

Approval of Traffic Pooling Plan Withheld

Division 6 of the Interstate Commerce Commission has denied an application of the Chicago & North Western, the Escanaba, Iron Mountain & Western, and the Chicago, Milwaukee, St. Paul & Pacific requesting its approval of a contract between the three companies for the pooling of interstate ore traffic and a division of the earnings thereon from the Menominee range in Michigan and Wisconsin to Escanaba, Mich. Under the plan the Milwaukee was to re-oute traffic now operated by it over the tracks of the Escanaba & Lake Superior over the rails of the North Western and the commission holds that before it may lawfully abandon such operation it must procure from the commission a certificate of convenience and necessity permitting such abandonment. The applicants had contended that the rerouting of the traffic fell far short of the essentials of abandonment of a line.

Long Island's Grade Crossing Elimination Expenditures

In newspaper advertisements defending its proposed increase in commutation fares, the Long Island calls attention to the fact that in sharing grade crossing elimination costs it is "spending millions for public convenience." The advertisement points out that the New York law requiring railroads to pay 50 per cent on such projects has to date cost the Long Island $36,000,000 of its own money to eliminate 356 grade crossings—large expenditures which "do not bring in additional revenue to the railroad."

It is also pointed out that grade crossing eliminations enhance property valuations and thus increase tax payments by the railroads. As a concrete example the advertisement cites its extra taxes of $28,000 a year due to increased assessments at Valley Stream, where eight grade crossings were recently eliminated. The Long Island's contribution to this improvement amounted to $1,369,707.20—a sum equal to the total commutation fares which, under the new schedule, would be paid by the 1236 Valley Stream-New York commuters during the next seven years.

Greater Precautions by Drivers at Grade Crossings Recommended

The Bureau of Safety of the Interstate Commerce Commission has issued a report on the derailment of a Pennsylvania passenger train as the result of striking a motor truck at a grade crossing at Upper Sandusky, Ohio, on July 17, which resulted in the death of one railroad employee and the injury of 27 passengers on the train, 7 dining car employees, 2 railroad employees, and the driver of the truck.

The following recommendations are made:

1. That adequate steps be taken by responsible authorities to enforce rules and regulations having to do with the precautions required to be taken by drivers of motor vehicles before passing over railroad crossings at grade.

2. That adequate measures be adopted and enforced by motor transportation companies and by proper authorities to make certain that the drivers of motor trucks do not work unreasonably long hours, and that opportunity is afforded for adequate rest after periods on duty.

Transportation Association Adopts Program of Research

At a meeting held in Chicago on September 25, the board of directors of the Transportation Association of America adopted a specific program of research, organization and education designed to sus-

tain the principles of individual enterprise and competition in the operation of the nation's transportation. Research will be developed along two major lines: (1) The possibilities of co-ordinated service between modes of transportation, and (2) a determination of what can be done by each transport industry for the rendering of efficient service on the basis of a reasonable return on investment. The effect and necessity of government subsidy will be studied. The association will first foster the adoption of certain fundamental principles of co-operation between the various classes of transportation, predicating its research program step by step. Public education will be conducted through the enlistment of membership of all groups in agriculture and industry, decentralizing this function through the inauguration of regional or state organizations throughout the country.

Bank Mails Season Tickets to Patrons

Customers of the Terminal National Bank at Chicago, who ride on the Chicago & North Western, are being saved the inconvenience of going to the office for monthly commutation tickets; it is under a plan placed in effect between the bank and the passenger department of the railroad. The bank mails the monthly tickets a few days before the end of each month and charges the customer's account with the cost of the transportation.

Mutual Beneficial Association

The Mutual Beneficial Association of Pennsylvania Railroad Employees held its twenty-second annual meeting in Philadelphia, September 23-24. The association is strictly a fraternal and insurance organization, owned, managed and operated entirely by Pennsylvania employees. It makes available to employees the benefits of low rate, safe fraternal insurance, including thrift plans, monthly meetings and social events, and the Association's monthly railroad publication—The Mutual Magazine. The employe-members carry $8,000,000 insurance in their association; since formation in 1914, it has paid more than $1,150,000 in benefits. Of more than ordinary interest this year was the statement by C. M. Brinker, general secretary and chairman of the Finance Committee of the association, to the effect that a recent analysis of the association's bond holdings showed that, as a result of careful investment policies, they were saleable at $160,000 more than cost. Mr. Brinker added that during the 21 years of the association's history, including the past five years of the depression, it has never suffered a loss through default in interest or principal upon any investment owned by the organization.

Baltimore & Ohio Urges Fare Reduction

The Baltimore & Ohio has filed with the Interstate Commerce Commission a reply to the statement recently filed by the other eastern lines taking exception to the proposed report by Examiner Irving L. Koch recommending that the commission prescribe maximum passenger fares of two cents a mile throughout the country for use in coaches and of three cents a mile for use in Pullman cars. "The record clearly indicates," says the B. & O., "that the solution of the problem before the commission lies in the elimination of the surcharge and the fixing of fares that will permit the traffic to move." It earnestly urges the commission to take into consideration the competition which must be met by the railroads.

The western railroads have also filed a statement of comments on the statement of the Pullman Company, which had objected to so wide a spread as that proposed between fares good in coaches and those for use in Pullmans. Based on differences of cost, value of service, and different competitive conditions, they say, the finding of the examiner that a one-cent spread between the one-way fares in sleeping and parlor cars and in coaches, and that present bases of fares in the West are not unlawful, is fully justified by the record, but they agree with the Pullman Company that present conditions neither require nor justify any order fixing any differential.

Treasury Officers' Association Taken Over by A. A. R.

The twenty-ninth annual meeting of the Railway Treasury Officers Association was held at the Netherland-Plaza Hotel, Cincinnati, Ohio, on September 20-21.

Reports were heard from standing and special committees. Exploratory work on the subject of collection of shippers' invoices was reported upon by a special committee, which advocated the general inauguration of such service. Further progress in the establishment of joint credit arrangements at points in the Eastern Region served by two or more carriers was announced. These arrangements are in effect at 454 points in the East.

Papers were presented on the subjects of "Order-notify Shipments and Bills of Lading," "Extending Credit for Ninety-six Hours Without Bond," "Credit Unions" and "Joint Credit Rules and the Three-letter Plan."

Inasmuch as the functions of the Railway Treasury Officers Association have been assumed by the Association of American Railroads, action was taken dissolving the former Association. Further studies of problems affecting the treasury departments of railroads will be conducted by the treasury division of the finance department of the Association of American Railroads.

Increased Car Loading Expected in Fourth Quarter

Freight car loadings in the fourth quarter of 1935 are expected to be about 6.4 per cent above actual loadings in the same quarter in 1934, according to estimates just compiled by the 13 Shippers' Regional Boards. On the basis of these estimates, freight car loadings of the 29 principal commodities will be 4,805,388 cars in the fourth quarter of 1935, compared with 4,515,835 actual loadings for the same commodities in the corresponding period last year.

Twelve of the 13 Shippers' Regional Advisory Boards estimate an increase in the loadings for the fourth quarter of 1935 compared with the same period in 1934, the only one estimating a decrease being the Trans-Missouri-Kansas board, which covers the states of Arkansas, Missouri and Kansas, and Northeastern Oklahoma.

The tabulation below shows the total loading for each district for the fourth quarter of 1934, the estimated loadings for the fourth quarter of 1935, and the percentage of increase or decrease.

Shippers' Advisory Boards	Actual Loadings 1934	Estimated Loadings 1935	Per cent Increase
Allegheny	618,626	662,531	7.1
Pacific Coast	164,149	174,336	6.2
Pacific Northwest	140,336	170,361	21.4
Southeast	426,047	454,111	6.6
Southwest	313,759	324,373	3.4
Great Lakes	215,590	283,173	31.3
Atlantic States ..	536,700	554,758	3.4
Central Western .	220,841	229,440	3.9
New England ...	114,163	117,495	2.9
Northwest	234,369	250,371	6.8
Mid-West	648,056	700,977	8.2
Ohio Valley	592,909	607,629	2.5
Trans-Missouri-Kansas	290,290	275,833	5.0 dec.
Ttal	4,515,835	4,805,388	6.4 Inc.

Annual Meeting of Railway Fire Protection Association

The twenty-second annual meeting of the Railway Fire Protection Association will be held at the Hotel Southern, Baltimore, Md., on October 15 and 16. Most of the sessions will be given over to consideration of committee reports, the program listing, in addition to these reports and the usual preliminaries, only three addresses—that of W. F. Hickey, president of the Association, and others by Chief Howard Travers of the Baltimore City Fire Department and V. B. Willoughby, general mechanical engineer, American Car & Foundry Company.

The committee reports to be presented, in addition to those of the executive, auditing and statistical committees, will consider the following subjects:

October 15—Morning session: Bridges and trestles; natural gas and gasoline pipe lines on railroads.

October 15—Afternoon session: Shop plants; freight car heaters and refrigerator cars; incinerators; timber treating plants; fire alarm signal systems.

October 16—Morning session: Hand book; terminal classification and storage yards; fuel oil; gasoline and electric motor trucks; merchandise in transit—explosives and other dangerous articles; snow melting oil and handling of gasoline; hazards surrounding the handling, transportation and storage of cotton by railroads; stations, freight depots and warehouses; locomotive fire hazards.

October 16—Afternoon session: Affiliating with A.A.R. or N.F.P.A.; motor transportation, gasoline and Diesel engines; dust explosions in grain elevators (N.F.P.A. committee); American standards specifications for the construction and performance of rubber lined hose (A.R.E.A. committee); rules for fire prevention as applied to maintenance of way department (A.R.E.A. committee); pyroxylin lacquers and finishes.

The Canadian Roads in August

The Canadian Pacific's statement of revenues and expenses for August shows net operating revenue of $508,340, as compared with $1,070,633 for August of last year,

a decrease of $562,293. Gross for the month, $10,936,576, showed an increase of $6,583, while operating expenses, $10,428,236, recorded an increase of $568,876.

For the eight months net operating revenue amounted to $8,096,540, as compared with $10,636,527 for the corresponding period of 1934, representing a decrease of $2,539,987. Gross for the eight-month period was $78,594,767, a decrease of $262,758, while operating expenses of $70,498,227 showed an increase of $2,277,229.

Operating revenues of the all-inclusive Canadian National System in August totaled $14,199,344, an increase of $666,926 over the figures for August last year. Operating expenses, totaling $13,626,797, showed an increase of $159,655 over last year, leaving net operating revenue for the month of $572,547, as against $65,276 in August, 1934, an increase of $507,271.

For the eight months operating revenues totaled $109,229,058, which was an increase of $2,206,618 over 1934. Operating expenses, aggregating $105,356,066, showed an increase of $3,465,887. Net operating revenues for the eight months totaled $3,872,992, a decrease of $1,259,269 from the net for the first eight months of last year.

Passenger Traffic Officers to Meet at Cincinnati, October 8 and 9

The seventy-seventh annual meeting of the American Association of Passenger Traffic Officers will be held on October 8 and 9 at the Hotel Alms, Cincinnati, Ohio. Consideration of the sessions' comprehensive program, which includes committee reports and discussions of pertinent passenger traffic subjects, will be preceded by addresses from the Association's president —A. J. Dickinson, passenger traffic manager of the Great Northern—and by John C. Emery, co-director, Section of Transportation Service, Federal Co-ordinator of Transportation.

Then, following the usual preliminaries and the report of the executive committee, the meeting will receive additional reports from its nine standing and special committees. Among these latter are the committee on national publicity and the standing committee on motor coach service and competition.

Under "New Business," the following subjects are among those listed for discussion:

Developments and improvements in train service and equipment: (a) New types and improvements in trains; (b) new types and improvements in Pullman and railroad equipment; (c) air conditioning.

Development of passenger traffic: (a) Fare reductions for special occasions to meet highway competition—bus and private automobiles; (b) possible effect from competitive standpoint of new motor bus bill; (c) revision and simplification of rules and regulations; (d) tourist agencies; (e) movement of privately owned automobiles in expedited freight service.

Advertising: (a) Joint advertising—local, regional and national; (b) sale of advertising space in time tables, menus and other media; (c) general advertising; (d) simplification of time tables.

Ticket Scalping.

Co-operation between rail carriers and steamship lines.

Dining car service.

Solicitation of passenger traffic: (a) City ticket offices; (b) soliciting organizations.

Remaining proceedings will include consideration of a proposed amendment to the constitution; the report of the executive committee on nominations and honorary memberships; election of officers; action on the president's nominees for executive committee memberships; and the appointment of standing committees.

"Mark Twain" to Be Delivered Next Week

The "Mark Twain" Zephyr of the Chicago, Burlington & Quincy will leave the plant of the Budd Manufacturing Company, Philadelphia, Pa., on October 8, will be formally christened with ceremonies at Hannibal, Mo., on October 25 and will be placed in daily service between St. Louis, Mo., and Burlington, Iowa, by way of Hannibal, the town which was the home of the author whose centennial is being celebrated this year about November 1 and for whom the train is named. Under the tentative schedule for the 221 miles, the train will leave St. Louis at 8:35 in the morning and arrive in Burlington at 2:20 in the afternoon. It will return the same day, leaving Burlington at 3:30 p. m. and arriving in St. Louis at 9:25 p. m. The train will supplant steam trains No. 43 and No. 44.

After leaving the Budd plant the train will move from Philadelphia to New York over the Pennsylvania and in the afternoon over the Lehigh Valley from New York to Bethlehem, Pa. At this point it will be exhibited to officers and employees of the Bethlehem Steel Company and students of Lehigh University, after which from 5 to 9 p. m. it will be on public exhibition at the Lehigh Valley station in Bethlehem. On October 9 it will be on public exhibition from 8 a. m. to 12 noon at Wilkes-Barre, Pa., and at Ithaca, N. Y., from 4:30 p. m. to 9 p. m. On the following day it will move over the Lehigh Valley from Ithaca to Buffalo, N. Y., for immediate transfer to the New York Central for a public exhibition scheduled at Erie, Pa., from 1 p. m. to 9 p. m. on that day. On October 11 it will move over the New York Central to Chicago.

Following these eastern exhibitions, tentative plans provide for a few all-day excursion trips on certain days. On one day four or five excursions are planned from Fort Madsion, Iowa, to Quincy, Ill.; on another day probably from St. Louis to West Alton, Ill., and on a third day from Keokuk, Iowa, to Quincy.

On October 25 the train will be formally christened at Hannibal. Its sponsor will be Miss Nina Gabrilowitsch, granddaughter of Samuel L. Clemens (Mark Twain) and daughter of Ossip Gabrilowitsch, conductor of the Detroit Symphony Orchestra. About the first of November the train will enter regular daily service between St. Louis and Burlington by way of Louisiana, Hannibal, Quincy, Keokuk and Ft. Madison.

Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—T. L. Burton, Room 3400 Empire State Bldg., New York, N. Y.

ALLIED RAILWAY SUPPLY ASSOCIATION.—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago, Ill. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmith's Association, International Railway Fuel Association, International Railway General Foreman's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. & R., M. & O. R. R., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 816 McCormick Bldg., Chicago, Ill.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York, N. Y. Annual meeting, October 8-9, 1935, Hotel Alms, Cincinnati, Ohio.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill. Annual meeting, January 17-18, 1936.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill. Annual meeting, October 15-17, 1935, Clift Hotel, San Francisco, Calif.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill. Annual meeting, October 15-17, 1935, Hotel Stevens, Chicago, Ill. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—T. H. Gurton, Mgr., Land Settlement and Development, C. N. R., St. Paul, Minn. Next meeting, December 5-6, 1935, Chicago, Ill.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in co-operation with the Association of American Railroads, Division IV.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—M. Fenaja, Missouri Pacific Lines Magazine, Missouri Pacific Lines Bldg., St. Louis, Mo.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—R. E. Schindler, Union Trust Bldg., Washington, D. C. Annual meeting, beginning October 21, 1935, New Orleans, La.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York, N. Y. Annual meeting, December 2-6, 1935.

Railroad Division.—Marion B. Richardson, 192 E. Cedar St., Livingston, N. J.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C. Annual meeting, January 28-30, 1936, Memphis, Tenn.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington, D. C.

Operations and Maintenance Department.—J. M. Symes, Vice-President, Transportation Bldg., Washington, D. C.

Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Freight Station Section.—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, October 15-16, 1935, Hotel Kentucky, Louisville, Ky.

Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y.

Division II.—Transportation.—G. W. Covert, 59 E. Van Buren St., Chicago, Ill.

Division IV.—Engineering.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

Construction and Maintenance Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

Electrical Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y.

Division V.—Mechanical.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill.

Division VI.—Purchases and Stores.—W. J. Farrell, 30 Vesey St., New York, N. Y.

Division VII.—Freight Claims.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.

Division VIII.—Motor Transport.—

George M. Campbell, Transportation Bldg., Washington, D. C.
Car-Service Division. — C. A. Buch, Transportation Bldg., Washington, D. C.
Traffic Department. — A. F. Cleveland, Vice-President, Transportation Bldg., Washington, D. C.
Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Chief Clerk and Claim Agent, General Claims Dept., Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, 1936, St. Paul, Minn.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W. Ry., 1519 Daily News Bldg., 400 W. Madison St., Chicago, Ill. Annual meeting, October 9-10, 1935, LaSalle Hotel, Chicago, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION. — L. F. Flanagan, Detroit Graphite Company, Room 1158, 20 N. Wacker Drive, Chicago, Ill. Meets with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 2271 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 S. Morgan St., Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W. 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, Room 299, 610 S. Main St., Los Angeles, Cal. Club not active at present.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—E. G. Bishop, Illinois Central R. R., East St. Louis, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO. — Mrs. M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CINCINNATI RAILWAY CLUB.—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Operation suspended indefinitely.

CLEVELAND RAILWAY CLUB. — F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings temporarily suspended.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

INTERNATIONAL RAILWAY FUEL ASSOCIATION. — T. D. Smith, 1660 Old Colony Bldg., Chicago, Ill.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabasha St., Winona, Minn.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Clyde S. Bailey, 810 18th St., N. W., Washington, D. C. Annual meeting, October 15-18, 1935, Hermitage Hotel, Nashville, Tenn.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, Suite 322, 910 S. Michigan Ave., Chicago, Ill. Exhibit at A. R. E. A. Convention, March 9-12, 1936, The Coliseum, Chicago, Ill.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section (see Safety Section, Association of American Railroads).

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July and August, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, excepting June at Los Angeles and October at Sacramento.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—(Merged with Association of American Railroads.)

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton (Treas. and Asst. Sec.), First National Bank Bldg., Chicago, Ill. Annual meeting, November 7, 1935, Hotel Stevens, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago, Ill. Meets with Association of Railway Electrical Engineers.

RAILWAY FIRE PROTECTIVE ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 15-16, 1935, Southern Hotel, Baltimore, Md.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division, and Motor Transport Division, Association of American Railroads.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R., Division I.

RAILWAY TIE ASSOCIATION.—I. C. Rowe, 2091 Railway Exchange Bldg., St. Louis, Mo.

RAILWAY TREASURY OFFICERS' ASSOCIATION. — L. W. Cox, 1428 Broad Street Station Bldg., Philadelphia, Pa.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, 1936, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R., Signal Section.

SOCIETY OF OFFICERS, UNITED ASSOCIATIONS OF RAILROAD VETERANS.—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 5-6, 1935, Hotel Sinton, Cincinnati, Ohio.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A. B. & C. R. R., Atlanta, Ga.

TOOL FOREMEN SUPPLIERS' ASSOCIATION.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.

TORONTO RAILWAY CLUB.—R. H. Burgess, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION. — D. J. Higgins, Gardner-Denver Company, 332 S. Michigan Ave., Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.

TRAVELING ENGINEERS' ASSOCIATION. — W. O. Thompson, 1177 E. 98th St., Cleveland, Ohio.

WESTERN RAILWAY CLUB.—C. L. Emerson, C. M. St. P. & P., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Equipment and Supplies

FREIGHT CARS

MEXICAN RAILWAY.—Shipment of 50 new steel-sheathed box cars of 40 tons' capacity has just been made by the Koppel Industrial Car & Equipment Company, who built the equipment for this road.

THE CINCINNATI, NEW ORLEANS & TEXAS PACIFIC, reported in the *Railway Age* of February 16, page 282, as having ordered 300 automobile cars of 40 tons' capacity from the Pressed Steel Car Company, has increased this order by 200 cars, making a total of 500 cars.

PASSENGER CARS

THE CHICAGO, BURLINGTON & QUINCY is considering the purchase of a fourth car for each of its Twin Zephyrs.

IRON AND STEEL

THE GULF, MOBILE & NORTHERN has applied to the Interstate Commerce Commission for approval of an expenditure of $300,000, for which it has applied for a P.W.A. loan, for the purchase and laying of 30 miles of 90-lb. rail in place of 80-lb. rail on the main line of the New Orleans Great Northern.

THE CENTRAL OF NEW JERSEY has ordered 625 tons of steel for a bridge at Newark, N. J., from the Phoenix Bridge Company.

MISCELLANEOUS

THE PENNSYLVANIA has placed an order with the Timken Roller Bearing Company for roller bearings to equip all axles of the tenders of eight existing steam locomotives. A previous order included bearings and boxes to equip the engine trucks and trailer trucks of these locomotives.

Construction

CANADIAN NATIONAL.—This company has awarded a contract for the new station at London, Ont., to the Pigott Construction Company, Hamilton, Ont., and a contract for a five-stall extension to its engine house, Turcot yard, Montreal, Que., to the St. George Building Company, Montreal. Construction work has recently been commenced on the second unit of the new passenger station at London. The first unit just recently completed consisted of the underground passenger concourse and the platforms and train sheds. The contract now awarded is for the superstructure or station proper, which is connected to the underground concourse by an easy ramp. The new structure occupies approximately the same site as the old station, which has been demolished, and will have an overall length of about 240 ft.; it will be of steel and reinforced concrete construction with cut stone and brick facing.

CENTRAL OF NEW JERSEY.—A contract has been given to the Franklin Contracting Company, Newark, N. J., for construction of an underpass on New Jersey State Highway, Route No. 31, at Cornell boulevard, Raritan, N. J., to cost about $140,000. Bids have been received for widening the highway underpass of New Jersey State Highway, Route No. 21, at Ward street, Newark, to cost about $220,000.

ERIE.—The Interstate Commerce Commission has authorized this company and the Nypano R. R. to abandon 1.3 miles of line near Pavonia, Ohio, and to construct a substitute line 1.2 miles in length in its place. The line change is necessitated by flood control work being done by the federal government, which will pay the expense.

NEW YORK CENTRAL.—A contract has been given to William M. Ballard, Inc., Syracuse, N. Y., for the construction and complete finish of a mail and service building with items of additional work. The building will be located on the south side of Burnet avenue between Crouse avenue and Catherine street, Syracuse.

Supply Trade

The Mississippi Valley Structural Steel Company has moved its Chicago sales office to its plant at Melrose Park, Ill.

Joseph M. Bandish has been appointed director of sales of the metallic packing division of the **Felt Products Manufacturing Company,** with headquarters at 1508 Carroll avenue, Chicago.

The Western Railroad Supply Company, Chicago, has been appointed exclusive sales agents for the automatic crossing gates manufactured by the **Automatic Safety Gate Company,** Indianapolis, Ind.

J. D. McGillis, assistant manager of the **Montreal Locomotive Works, Ltd.,** Montreal, Quebec, Canada, has been appointed works manager and **William Townsend** has been appointed superintendent.

Edward L. Ryerson, Jr., was elected vice-chairman of the board of the **Inland Steel Company** at a meeting on September 30. The action follows the recent consolidation of Joseph T. Ryerson & Son, of which he was president, with Inland.

James S. Ogsbury has been elected vice-president and comptroller of **Whitman & Barnes, Inc.,** Detroit, Mich. Mr. Ogsbury's headquarters will be at Detroit. **Erik Andersen,** treasurer of the company and its subsidiaries, has been elected vice-president and treasurer, with headquarters at Chicago.

Frank F. Chiles, formerly manager of sales of the Bar division of Corrigan, McKinney Steel Company, has been appointed assistant manager of sales of the Bar division, **Republic Steel Corporation,** with headquarters at Youngstown, Ohio. In his new capacity, Mr. Chiles will assist **W. F. Vosmer** in supervising the sales of all carbon semi-finished steel bars, shapes and plates produced by Republic.

Jules A. Morland has been appointed technical representative in South America, with headquarters at City Hotel, Buenos Aires, Argentina, of the **Timken Roller Bearing Company,** Canton, Ohio. Mr. Morland, who was graduated from Rensselaer Polytechnic Institute as a mechanical engineer, has been with the Timken organization since 1927, having been sales engineer in the Railroad division. Mr. Morland will also represent the associated Timken organizations now established in other countries.

A. E. Munch, Jr., has been appointed district manager of the New York branch and manager of the Export department of the **Garlock Packing Company,** Palmyra, N. Y. Mr. Munch served as Chicago branch representative of the company, handling northwestern railroad and industrial accounts, until his appointment as branch manager at Palmyra, which position he held until he was transferred to New York. **S. E. Anderson,** representative of the company in western Canada at Winnipeg, Manitoba, has been appointed district manager of the Palmyra branch, with headquarters at Palmyra.

The Automatic Crossing Gates, Inc., a New York corporation with headquarters in Louisville, Ky., and offices in New York and Chicago, has been organized to manufacture and sell crossing gates. The officers of the new corporation are **Milton Smith, Jr.,** president; **Raymond G. Clark,** vice-president; **M. McD. Dilley,** vice-president; **J. H. McAlarney,** secretary and treasurer. Messrs. Smith, Clark and Dilley, who were formerly connected with the Automatic Safety Gate Company, have been in contact with the development of automatic gates for more than six years. The Automatic Crossing Gates, Inc., has developed a new type of electrically-controlled hydraulically-operated gate, which is being manufactured in co-operation with the American Car & Foundry Company.

Production and sales of the **Carnegie Steel Company,** the **Illinois Steel Company** and the **Lorain Steel Company,** subsidiaries of the **United States Steel Corporation,** were unified into the **Carnegie-Illinois Steel Corporation** on October 1. **Benjamin F. Fairless,** formerly executive vice-president of the Republic Steel Corporation, heads the new organization as president; **I. Lamont Hughes,** formerly president of Carnegie, is executive vice-president; **C. V. McKaig,** formerly vice-president and general manager of sales of Carnegie, is vice-president and general manager of sales; and **J. E. Lose,** formerly vice-president of Carnegie, is vice-president in charge of operations. All of the above officers will maintain offices in both Pittsburgh, Pa., and Chicago. **G. Cook Kimball,** formerly vice-president of Illinois, is vice-president and chief executive of the Chicago district; **William I. Howland, Jr.,** formerly vice-president and general manager of sales of Illinois, is vice-president in charge of western sales, both with offices in Chicago; **L. H. Burnett,** formerly vice-president of Carnegie, is vice-president at Pittsburgh; and **Carroll Burton,** formerly president of the Lorain Steel Company, Johnston, Pa., is vice-president in charge of the Lorain division. **J. W. Hamilton,** formerly secretary of Carnegie, is secretary; **William Donald,** formerly auditor and assistant secretary of Carnegie, is auditor; and **H. E. Jeffries,** formerly treasurer of Carnegie, is treasurer.

I. Lamont Hughes

I. Lamont Hughes was born at Mercer, Pa., in January, 1878, and was educated in the common schools and high school. He began work in the engineering department of the Edgar Thomson Works of the Carnegie Steel Company in September, 1897. He subsequently was consecutively in charge of engineering for the Union Steel Company, later part of the American Steel

C. V. McKaig

& Wire Company, master mechanic of the bar mills of the Youngstown district of the Carnegie Steel Company, assistant general superintendent of those mills and later general superintendent of the same mills. In 1916 he was appointed assistant general superintendent of the entire Youngstown district of the Carnegie Steel Company. He subsequently served as general superintendent in charge of the Canadian Steel Company's plant at Ojibway, Ontario, and in June, 1918, went to the Neville Island gun plant at Neville Island, Pa., as general superintendent of the operations being carried out by the United States Steel Corporation for the government. In 1919 Mr. Hughes became president of the Lorain Steel Company, a subsidiary of the United States Steel Corporation, returning to the Carnegie Steel Company, Youngstown, as general superintendent in January, 1920. Five years later he became vice-president of that company and from April, 1928, he served as a vice-president of the United States Steel Corporation until his election in August, 1930, as president of the Carnegie Steel Company.

C. V. McKaig was born at Pittsburgh and was educated in the public schools, later completing classical and scientific courses at Princeton University. Mr. McKaig entered the steel business with the old Park Works of the Crucible Steel Company, Pittsburgh, working through a number of departments until he became superintendent of the bar mills. In 1908 he joined the Carnegie Steel Company and in April, 1929, became general manager of the bar and hoop production, including design, engineering and marketing of all spe-

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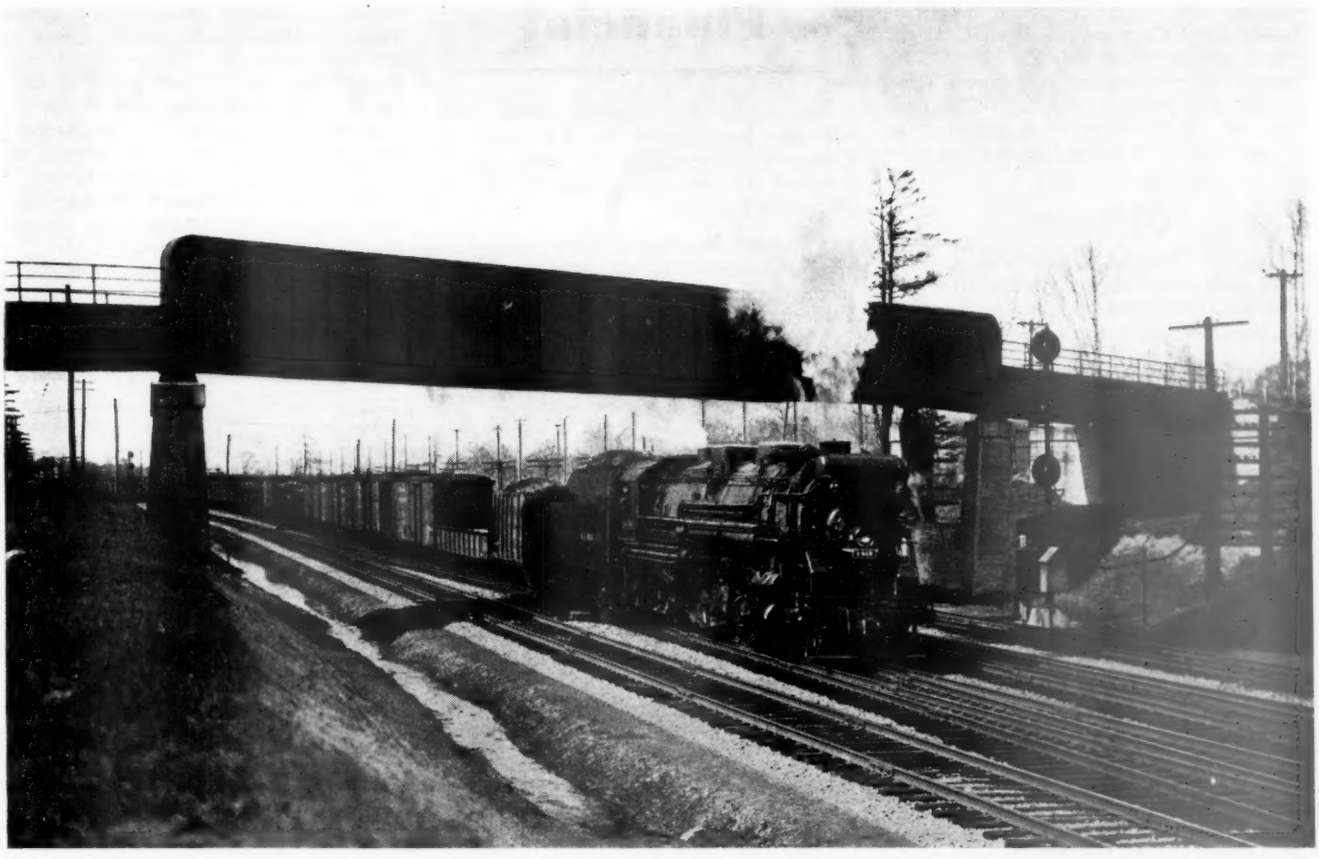

MODERN POWER

INCREASES EARNING CAPACITY OF EVERY INVESTED DOLLAR!

Modern steam locomotives are designed to give maximum effectiveness in utilization, operation and maintenance. They increase the gross ton-miles per train hour from 25 to 30% as compared with locomotives built ten or more years ago.

Modern power provides the capacity and speed plus dependability that increase the earning capacity of every dollar invested in the entire railroad.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA OHIO

cial bar mill products. When the Great Lakes Steel Corporation, Detroit, Mich., began operations later in 1929, Mr. McKaig became its vice-president in charge of sales, leaving that position in June, 1932, to return to the Carnegie Steel Company as vice-president and general manager of sales of that company.

OBITUARY

John T. Twohy, a partner in the railroad contracting firm of Twohy Brothers, Portland, Ore., died at Los Angeles, Cal., on September 29 at the age of 70 years.

Garrett Burgert, who was treasurer of Tuco Products Corporation, New York, until his retirement from active business about a year ago, died on September 16, at his home in Suffern, N. Y., at the age of 75.

William Downs, eastern sales manager and engineer of tests of the Burden Iron Company, Troy, N. Y., died suddenly at his home in Troy on September 28, at the age of 61. Mr. Downs began work 43 years ago with the same company and has been in its continuous service ever since.

P. D. Miller, manager of the New York branch and of the Export division of the Garlock Packing Company, Palmyra, N. Y., died in New York on September 18. Mr. Miller was born in 1893 and his entire business career was with the Garlock Packing Company, having started in 1912 as a clerk in the Philadelphia branch office and later being promoted to a sales position in the Philadelphia territory. In 1923, he was appointed district manager of the Birmingham office and in 1925 was transferred to New York as manager of that office.

Frederic T. DeLong, vice-president in charge of sales of the Chicago Railway Equipment Company, Chicago, died at Jackson, Wyo., on September 28, following a week's illness. He was born at Utica, N. Y., and began his business career in a clerical position in Utica. After holding various positions with other companies, he was appointed general manager of the Buhl Malleable Company, Detroit, Mich., which position he held until 1905. In that year he entered the employ of the Chicago Railway Equipment Company as second vice-president and sales manager. In 1930, he was appointed vice-president in charge of sales, which position he held until his death.

TRADE PUBLICATION

WELDING ELECTRODES. — The Wilson Welder and Metals Company, Inc., North Bergen, N. J., has issued an informative catalogue describing the metallic composition, physical properties and applications of Wilson welding electrodes, together with the welding procedure in connection with their use. The catalogue contains many illustrations of difficult welding operations, and tables showing the chemical analysis of Wilson electrodes, Wilson electrode numbers and applications, arc voltages, amperes recommended for different diameter electrodes, sizes and weights of electrodes, and the amount of deposited metal.

Financial

APPALACHIAN. — *Abandonment.* — This company has applied to the Interstate Commerce Commission for authority to abandon its line from Ela, N. C., to Ravensford, 10 miles.

ATLANTIC NORTHERN.—*Abandonment.*— In an application to the Interstate Commerce Commission this company has asked authority to abandon its line from Atlantic, Ia., to Kimballton, 17.07 miles.

BALTIMORE & OHIO.—*R.F.C. Loan.*— This company has applied to the Reconstruction Finance Corporation for an extension to August 1, 1939, of its loans amounting to $31,610,400 maturing on November 21. The application stated that the collateral for the loans has a present value of 169.97 per cent of the amount of the loans.

BLISSFIELD. — *Acquisition.* — This company has applied to the Interstate Commerce Commission for authority to acquire and operate a line from Adrian, Mich., to Riga, formerly owned and operated and abandoned by the Toledo & Western.

CHICAGO & NORTH WESTERN.—*Trustee Appointed.*—Charles P. Megan, an attorney at Chicago, was appointed sole trustee of the Chicago & North Western on October 1 by Federal Judge John P. Barnes at Chicago. Mr. Megan is president of the Illinois Bar Association and general counsel of the Chicago Bar Association. Formerly he was counsel for the Chicago office of the Home Owners Loan Corporation and later counsel for the regional office of that body. Representatives of the R. F. C. and 16 insurance companies, creditors of the North Western, appeared in court and nominated Fred W. Sargent, president of the railway, and John W. Barriger III, chief examiner of the Railroad Division of the Reconstruction Finance Corporation, as two of the three proposed trustees in bankruptcy, but the court decided that in the interest of economy one trustee would serve. In his decision Judge Barnes said, "There have been suggested to the court for appointment as trustees some exceedingly capable men, men whose knowledge of railroad affairs and business is great. That the court has passed over them is not to be construed as a reflection on them or on their capabilities. This is particularly true of Mr. Sargent. Mr. Sargent's honesty and integrity are, of course, unquestioned and he is not passed because of lack of capability. The court believes that in the vast majority of cases it is best to have one trustee or receiver. A board of trustees or receivers increases expenses, contributes to delays in action and leads to divided responsibility.

"Furthermore, one man generally does all the work and makes the decisions, and the other or others acquiesce. This idea of the court eliminates Mr. Sargent as trustee because the statute provides that where a trustee is appointed who within one year prior thereto has been an officer, director or employee of the debtor corporation, the judge shall appoint another trustee or trustees who shall not have had any such affiliations. While another capable man who has not been an officer, director or employee of the debtor has been suggested for appointment by parties in interest, the court is of the opinion that the best interest of the property will be served by the appointment of a man whose name has not been suggested for the position by anyone at any time."

The court indicated that the carrier would be expected to have its reorganization completed by April 1, 1936. Mr. Sargent will continue as operating head of the railroad.

CHICAGO, BURLINGTON & QUINCY.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for a certificate authorizing the abandonment of two segments of its branch line between Sedan, Ia., and Elmer, Mo., from Sedan to Novinger, Mo., 31.4 miles, and from South Gifford, Mo., to Elmer, 4.7 miles.

CHICAGO, ROCK ISLAND & PACIFIC.—*Abandonment.*—The trustees have applied to the Interstate Commerce Commission for authority to abandon a line from Lackland Junction, Mo., to Wabash Junction, 6.65 miles.

DENVER & RIO GRANDE WESTERN.—*Interest and Payment Postponed.*—Directors of this company meeting on September 30 voted to postpone for 30 days, bond interest due October 1. Decision on filing a petition for reorganization was likewise deferred for a similar period. Holders of large blocks of the bonds concerned are understood to have approved the postponement.

ERIE.—*R.F.C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a three-year extension of nine notes aggregating $12,119,310 maturing from October 31 to January 3, secured by collateral which, according to the application, had a market value on September 24 of 195 per cent of the face of the notes.

GREAT NORTHERN.—*Bonds.*—The Reconstruction Finance Corporation on September 30 made public a letter from Chairman Jones to President W. P. Kenney in which the former agreed that, subject to I.C.C. approval, the corporation would lend to the Great Northern all or any part of $50,000,000 with which to help meet the maturity of its issue of $105,850,000 of 7 per cent bonds on July 1, 1936, on condition that the company pay from its working balance the $5,850,000 and issue $100,000,000 of new bonds maturing in 20 or 25 years at 4½ per cent, the present bondholders to accept at par and accrued interest new bonds or not less than one-half in new bonds and the remainder in cash.

"Our loan," Mr. Jones said, "will be in the form of bonds which we will take at par and accrued interest, or if given a satisfactory margin of additional collateral, our rate will be 4 per cent for the first five years and 4½ per cent thereafter; the bonds to be approved by the Interstate Commerce Commission and acceptable to our board and our counsel; the money to

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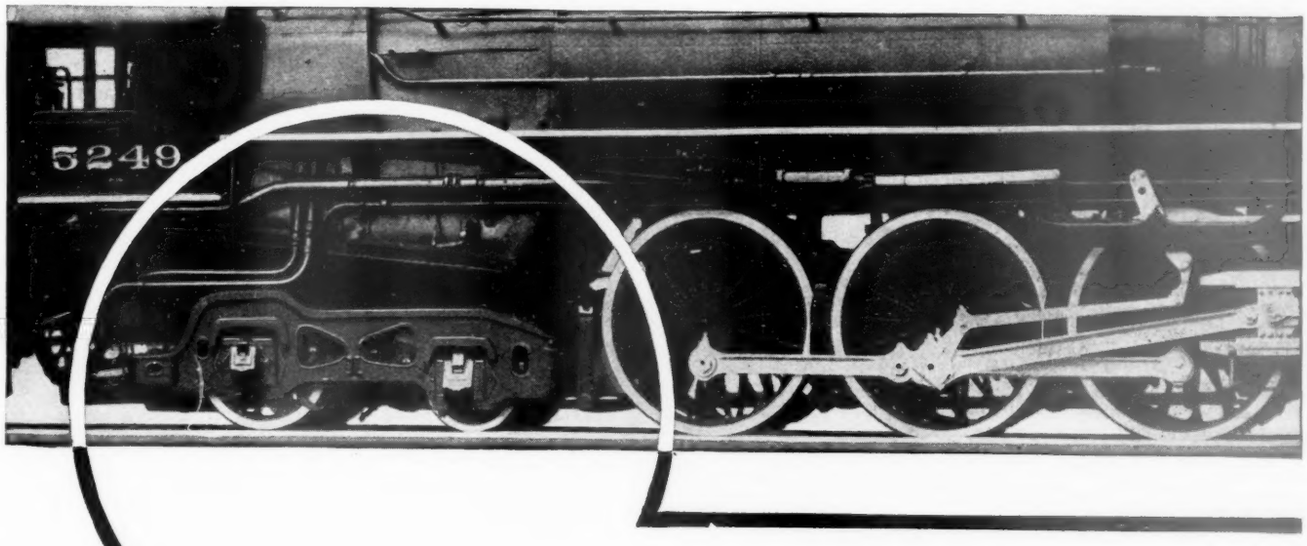
BALANCED POWER

MEANS *Lower* MAINTENANCE



In any service the locomotive must have adequate tractive effort to start and to accelerate the train to road speeds and ample horsepower to maintain the required road speeds.

To meet these conditions the Booster equipped locomotive is designed to provide ample horsepower for road speeds; the extra tractive effort needed for starting and for the hard spots being provided by The Locomotive Booster.

This permits the use of smaller diameter cylinders with correspondingly lower piston thrust and correspondingly reduced stresses on motion work and frame.

Lowered stresses mean reduced wear and reduced costs for locomotive maintenance.

Booster Repair Parts made by the jigs and fixtures that produced the original are your best guarantee of satisfactory performance.

REG. U.S. PAT. OFF.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

be available to the road on ten days' notice on or before July 1, 1936. With a view to converting this debt, or as much of it as possible, into stock, we suggest for your consideration that the new bonds provide for conversion into stock upon a basis that will add to the desirability of the bonds, giving the holders of the bonds an opportunity to participate in the prosperity of the road, and preserving to the stockholders their preemptive rights. We will require as a further condition to our commitment that the expense, attorneys' fees and bankers' charges, in exchanging new bonds for the old, be, in our opinion, reasonable."

GULF, MOBILE & NORTHERN.—*P. W. A. Loan.*—This company has applied to the Interstate Commerce Commission for approval of the expenditure of $300,000, for which it has applied for a loan from the Public Works Administration, for the purchase and laying of 30 miles of 90-lb. rail in place of 80-lb. rail on the main line of the New Orleans Great Northern.

LOUISIANA & ARKANSAS.—*Securities.*—The Interstate Commerce Commission has authorized this company to issue a 4½ per cent promissory note for $1,500,000, maturing in three years, and to pledge as collateral security $3,000,000 of its first mortgage 5 per cent, series A, bonds. The proceeds of the loan are to be used to pay maturing indebtedness, taxes, interest and other current expenses, and arrangements have been made for its sale to the Chase National Bank, New York.

MAINE CENTRAL.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to purchase the properties of the Eastern Maine, an 18-mile line from Bangor, Me., to Bucksport, now operated by the Maine Central under lease.

NEW YORK CENTRAL.—*Proposed Funding of Bank Loans.*—Jesse H. Jones, chairman of the Reconstruction Finance Corporation, on October 1 made public a series of letters exchanged with Harold S. Vanderbilt, a member of the N. Y. C. executive committee; Jackson E. Reynolds, president of the First National Bank of New York, and George Whitney, of J. P. Morgan & Co., indicating a controversy over the proposal made by Chairman Jones that the company's temporary loans of approximately $90,000,000 be converted into long-term obligations to be sold to the investing public, which Mr. Jones had also discussed in newspaper interviews. The temporary loans include those held by a number of banks on a demand basis and a $27,000,000 loan from the R. F. C. Messrs. Reynolds and Whitney, in a letter to Mr. Vanderbilt on September 18, had expressed numerous objections to the plan, saying it would be impossible to sell to the investing public at par a bond of the company carrying 4 per cent interest, as suggested by Mr. Jones, to be convertible into stock at $25 a share. They said that to sell a public issue the company would have to assume a substantially increased financial burden, and suggested that the best course to pursue would be to "cease all further agitation of this question" of presently refunding the loans, that all the loans be put on precisely the same basis of demand loans, that the company be given the right to make payments at any time on a pro rata basis as among all the lenders, and that an arrangement be made that each lender agree not to demand payment except on six months' notice to the company and all other lenders. If the R. F. C. would do likewise, they said, the banks were prepared to place their loans on the above basis. Mr. Vanderbilt replied that the company was in entire accord with the findings and sent a copy of the letters to Mr. Jones. After a conference with Mr. Vanderbilt, Mr. Jones decided to make public the entire correspondence, including a letter to Mr. Vanderbilt dated September 29 in which he replied to some of the arguments made by the bankers and particularly to an expression of doubt as to the usefulness of Mr. Jones' statements to the press in reference to "financial plans which cannot presently succeed." He said he was a public official and that "one very good way to avoid further publicity of this character would be to put your finances in order." This letter referred to his offer expressed to Mr. Reynolds that if the company would authorize a $90,000,000 convertible issue with which to liquidate its current debts, the R. F. C., with the approval of the Interstate Commerce Commission, would take one-half of the loan, which he said would pay its present R. F. C. debt of $27,000,000 and provide a reduction of its bank debts of approximately 30 per cent. At the request of the company, the R. F. C. on October 1 agreed to extend for 60 days New York Central notes totaling $15,600,000 due on that date which Mr. Vanderbilt had requested be placed on the demand basis suggested by the banks.

NEW YORK, CHICAGO & ST. LOUIS.—*Notes.*—An issue of 6 per cent notes totaling $14,946,000 of this company matured on October 1 and were not paid. Holders of 51 per cent of the notes, it is stated, have assented to the plan for extending the maturity date for three years, and further assents bringing the total approximately to the two-thirds required to prevent court intervention are believed to be forthcoming.

NORTHWESTERN PACIFIC.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon that part of a branch line extending from a point near Fulton, Calif., to the end of the line at Duncan Mills, 23 miles.

NORTH WESTERN OF SOUTH CAROLINA.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon as to interstate and foreign commerce its lines as follows: Wilson's Mill, S. C., to Millard Junction, 17 miles; St. Paul through Millard Junction to Sumter, 24.5 miles; Sumter through Manville Junction to Southern Junction, 24.5 miles; a terminal line in Camden, 0.5 mile; Manville Junction to Rose Hill, 10 miles—a total of 76.5 miles. The company has also been authorized to abandon operation under trackage rights over the Atlantic Coast Line for 0.8 mile at Wilson's Mill, over 1 mile of the Atlantic Coast Line in Sumter and over 4 miles of the Southern between Southern Junction and Camden and over Southern tracks and sidings at Camden aggregating 1.5 miles.

PENNSYLVANIA.—*Bonds.*—The Long Island on October 1 paid off $1,726,000 of New York, Brooklyn & Manhattan Beach first consolidated mortgage 5 per cent bonds. The Pennsylvania advanced the funds to the Long Island for meeting this maturity.

WABASH.—*Reorganization Plan Being Studied.*—Plans for the reorganization of this company and the Ann Arbor are under consideration, and should be ready prior to January 1 when loans to it from the Reconstruction Finance Corporation mature.

Average Prices of Stocks and Bonds

	Oct. 1	Last week	Last year
Average price of 20 representative railway stocks..	35.21	36.09	34.71
Average price of 20 representative railway bonds..	73.35	73.38	72.56

Dividends Declared

Atlantic Coast Line.—Preferred, $2.50, semi-annually, payable November 12 to holders of record October 24.

Lehigh & Hudson River.—$1.00, quarterly, payable September 30 to holders of record September 19.

Philadelphia & Trenton.—$2.50, quarterly, payable October 10 to holders of record September 30.

St. Louis, Rocky Mountain & Pacific,—25¢, payable October 21 to holders of record October 5.

Railway Officers

EXECUTIVE

Eugene S. Williams, general counsel of the Western Maryland, with headquarters at Baltimore, Md., has also been elected vice-president.

Herbert Fitzpatrick, vice-president and general counsel of the Chesapeake & Ohio, with headquarters at Cleveland, Ohio, has had his title changed to vice-president in charge of the law department.

R. H. MacCready, assistant to president of the Bangor & Aroostook, with headquarters at Bangor, Me., has been appointed vice-president. His duties will be the same as heretofore—to carry out policies established by the president, and such other matters as may be assigned to him.

FINANCIAL, LEGAL AND ACCOUNTING

William Anderson, assistant auditor, freight traffic, of the Chicago, Rock Island & Pacific, has been appointed auditor, freight traffic, with headquarters as before at Chicago, to succeed **Paul Peters,** who has retired. **M. E. Pierce,** chief clerk to the auditor, passenger traffic, has been appointed auditor, passenger traffic, to replace **C. G. Weaver,** who has also retired. **W. I. Caldwell,** auditor, freight over-

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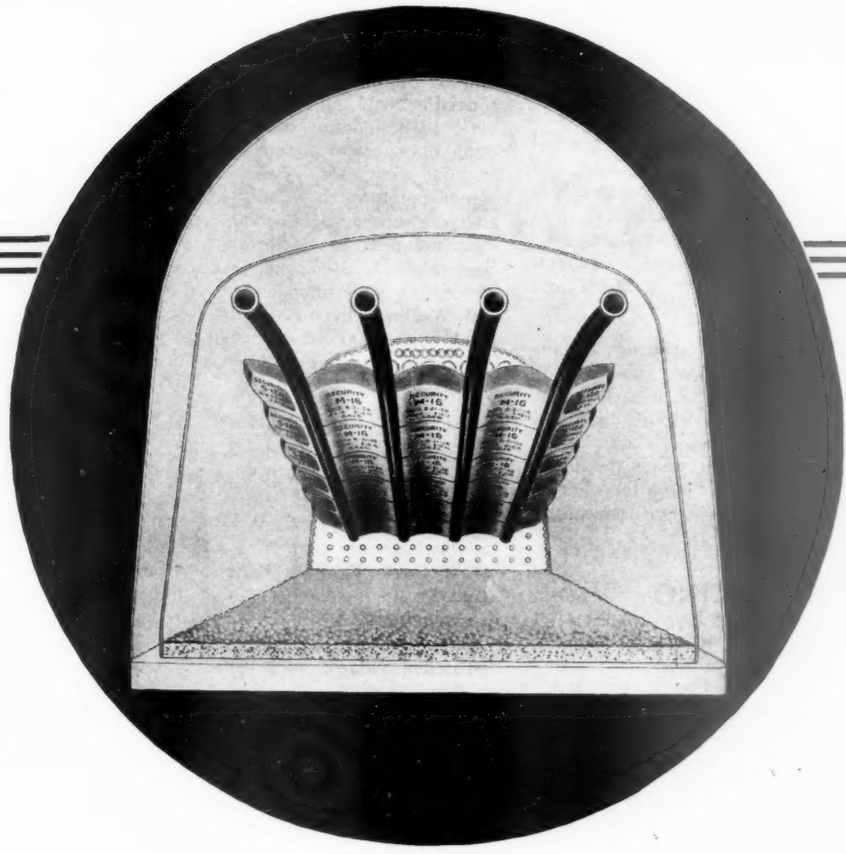
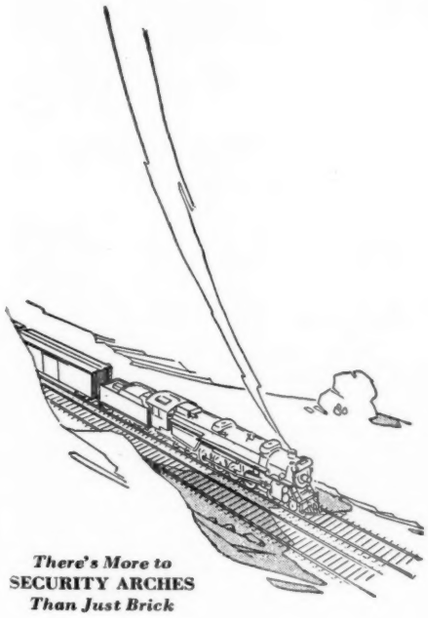


All THREE *Factors Are Essential*



There's More to SECURITY ARCHES *Than Just Brick*

Security Sectional Brick Arches are built upon a foundation of railroad experience and combustion knowledge combined with an adequate service of supply.

All three factors are essential for satisfactory Brick Arch service. For many years locomotive combustion and its relation to Arch Brick has been the study of American Arch Company Engineers. Designs have been constantly improved and developed so that today the Security Arch performs more efficiently than ever before. Then too, during this time, the American Arch Company has perfected the special service of supply that assures proper quality and type of Security Brick promptly available at all points of consumption.

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED

Locomotive Combustion Specialists » » »

charge claims, having retired, the jurisdiction of the auditor of freight traffic has been extended over the department of freight overcharge claims.

Robert B. Tunstall, assistant general counsel of the Chesapeake & Ohio, has been appointed general counsel, with offices at Cleveland, Ohio, and Richmond, Va., and **S. L. Merriam,** counsel for the Pere Marquette, has been promoted to general counsel, with offices at Detroit, Mich., and Cleveland.

D. V. Cowden, tax attorney of the Southern Pacific, has been appointed to the newly-created position of real estate and tax commissioner, with headquarters as before at San Francisco, Cal. In his new position Mr. Cowden, under the direction of the president, will have jurisdiction over all of the company's real estate and tax matters.

OPERATING

J. J. Sullivan has been appointed assistant superintendent of the Salt Lake division of the Southern Pacific, with headquarters at Ogden, Utah, succeeding **H. W. Wistner,** deceased.

J. L. Palethorpe, acting superintendent of the Edmonton division of the Canadian Pacific, with headquarters at Edmonton, Alta., has been appointed superintendent of the same division, succeeding **J. H. Chown,** deceased.

L. P. Hanson, first assistant superintendent of the St. Louis zone of the Pullman Company, has been appointed acting superintendent, with headquarters at St. Louis, Mo., to succeed **A. V. Burr,** who retired on October 1, after 45 years of service with this company.

Agnew T. Dice, Jr., division superintendent of the Reading, with headquarters at Philadelphia, Pa., has been appointed assistant to general manager. The New York division has been abolished and (except Perkiomen branch) has become part of the Philadelphia division. The Perkiomen branch has become part of the Reading division.

W. F. Williams, superintendent of telegraph of the Seaboard Air Line, with headquarters at Norfolk, Va., has been appointed advisory superintendent telegraph, in which capacity he will serve until January 1, 1936, when he will retire from active service. Mr. Williams has been in continuous service of this road for 58 years and has served as superintendent of telegraph for 40 years. **F. H. Bagley,** signal engineer at Norfolk, has been appointed superintendent telegraph and signals, with jurisdiction over signal, telephone, telegraph and road electric construction, operation and maintenance, with the same headquarters.

Robert E. Ryan, superintendent of the Central and Western divisions of the Minneapolis & St. Louis, whose appointment as general superintendent of this company, with headquarters at Minneapolis, Minn., was noted in the *Railway Age* of September 28, was born on September 18, 1872, at Newbern, N. C. He entered railway service in 1896 with the St. Louis, Iron Mountain & Southern (now part of the Missouri Pacific), and remained with this road until 1910, holding successively the positions of operator, agent and trainmaster. In that year Mr. Ryan went with the Minneapolis & St. Louis as trainmaster and was subsequently promoted to assistant superintendent at Watertown, S. D. On September 1, 1917, he was further advanced to superintendent of the Central and Western divisions, with headquarters at Minneapolis, which position he was holding at the time of his recent appointment.

Alfred W. Towsley, assistant to the operating officer of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has retired. Mr. Towsley was born at Whitewater, Wis., and entered railway service with the Chicago, Milwaukee, St. Paul & Pacific, serving as agent, train dispatcher, and chief train dispatcher until 1893. In that year he went with the Norfolk & Western as chief train dispatcher and served in this capacity and as car service agent, chief clerk and assistant to the vice-president and general manager until 1899. At the end of this period he went with the Atchison, Topeka & Santa Fe as assistant to the vice-president in charge of operation and maintenance, later being appointed superintendent of transportation of this company. In 1901 Mr. Towsley went with the Seaboard Air Line as assistant to the vice-president and general manager, later serving as superintendent, assistant to the president, acting general superintendent and general manager. In 1906, he became connected with the Chicago & North Western on special duties out of the office of the vice-president, later being appointed superintendent. Mr. Towsley went with the Ann Arbor in 1913, serving as vice-president and general manager until 1917, when he entered the service of the Rock Island as general superintendent of transportation. Subsequently, he was appointed assistant to the vice-president in charge of operation. When trustees were appointed for the road his title was changed to assistant to the operating officer.

TRAFFIC

J. L. Dee, commercial agent for the Chicago, Burlington & Quincy at Los Angeles, Cal., has been promoted to general agent, with the same headquarters to succeed **W. W. Elliott,** who has retired.

A. A. Gallagher has been appointed general southern freight agent of the Delaware & Hudson, with headquarters at Philadelphia, Pa., succeeding **W. H. Chase,** deceased. **Monte Pickens, Jr.,** has been appointed southeastern freight agent, with headquarters at Atlanta, Ga.

George E. White, general freight agent of the Chicago, Rock Island & Pacific, has been appointed to the newly-created position of assistant freight traffic manager, with headquarters as before at Chicago. **Benjamin F. Coons,** general agent at Los Angeles, has retired.

R. C. Davidson, general freight agent on the Chicago, Rock Island & Pacific at Chicago, whose appointment as assistant freight traffic manager, with the same headquarters, was noted in the *Railway Age* of September 28, has been connected with this railroad for 31 years. He was born on March 13, 1887, at Joliet, Ill., and first entered the service of the Rock Island

R. C. Davidson

as a mail clerk in the tariff bureau on August 1, 1904. In the following year he was appointed a tariff clerk and in 1910 he was advanced to assistant general freight agent. In 1915 Mr. Davidson was appointed assistant chief clerk to the freight traffic manager and in 1922 he was further advanced to chief clerk to the vice-president and freight traffic manager. He was appointed assistant general freight agent, solicitation, two years later and in 1927 he was made general freight agent, rates, which position he was holding at the time of his recent appointment as assistant freight traffic manager.

ENGINEERING AND SIGNALING

R. H. Stenhouse has been appointed division engineer of the Farnham division of the Canadian Pacific, with headquarters at Farnham, Que., succeeding **T. B. Ballantyne,** who has been transferred.

A. E. Greenawalt, electrical engineer of the Indiana Harbor Belt, with headquarters at Chicago, has had his jurisdiction extended to include the Western division of the New York Central, the West division of the Michigan Central, the Chicago River & Indiana and the Chicago Junction.

J. R. Hickox, hydraulic engineer of the Chicago, Burlington & Quincy, with headquarters at Chicago, has retired under the pension rules of this company but will remain with the railroad in a consulting capacity with the law department. The position of hydraulic engineer has been abolished.

MECHANICAL

David P. Carey, superintendent of shops of the New York, New Haven &

Continued on next left-hand page

George Washington Bridge—Largest suspension bridge in the world with a channel span of 3,500 feet. It was completed in 1931 and spans the Hudson River between New York City and Fort Lee, New Jersey.

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Hartford, with headquarters at Readville, Mass., has been appointed assistant general mechanical superintendent. **John C. Hassett,** mechanical engineer at New Haven, has been appointed assistant to gen-

David P. Carey

eral mechanical superintendent, with the same headquarters. **Kenneth Cartwright,** assistant mechanical engineer at New Haven, has been appointed mechanical engineer, succeeding Mr. Hassett. **B. R. Jones** has been appointed assistant mechanical engineer and **J. W. O'Meara,** superintendent of shops at Van Nest, N. Y., will serve in the same capacity at Readville. **E. J. Ball** has been appointed superintendent of shops at Van Nest.

David P. Carey entered the service of the New Haven in 1901 as a machinist apprentice at the Norwood shops, Mass., and was appointed foreman in May, 1912, at the Roxbury, Mass., shop, later moving to the Dover street enginehouse, Boston, in the same capacity. In March, 1918, he was promoted to general foreman, and five years later he became acting master mechanic at Taunton, Mass. Mr. Carey was appointed master mechanic of the Midland division in October, 1923, and in Febru-

J. C. Hassett

ary, 1929, he became superintendent of shops at Readville.

John C. Hassett was born on May 21, 1882, at Susquehanna, Pa., and was educated at Laurel Hill Academy. He entered railway service in August, 1898, as clerk in the mechanical engineer's office of the Erie, serving consecutively as machinist apprentice, draftsman, and technical instructor of apprentices for that road. In 1910 Mr. Hassett became draftsman for the Union Pacific and in 1911 he went with the Baltimore & Ohio in the same capacity. Mr. Hassett entered the service of the New Haven in 1911 as draftsman and the following year he was promoted to chief draftsman. In September, 1918, he was promoted to mechanical engineer, the position he held until his recent appointment.

SPECIAL

Cyrus R. Young, superintendent of transportation of the Illinois Central, has been appointed manager of personnel, with headquarters as before at Chicago, to succeed **George E. Patterson,** deceased. Mr. Young has been connected with the Illinois Central continuously for 31 years. He was born on May 25, 1885, at Oakland, Ky., and began his business career in 1900 as a pharmacist apprentice at

Cyrus R. Young

Bowling Green, Ky. In 1903, after serving for a short time as a police reporter on the Louisville Herald, Mr. Young entered railway service as a train baggageman on the Louisville & Nashville. He left this road the following year to go with the Illinois Central as a stenographer in the chief dispatcher's office at Fulton, Ky. He then served successively as car distributor, assistant timekeeper, timekeeper, and chief clerk to assistant superintendent until 1908, when he was appointed assistant chief clerk to the general superintendent at Memphis, Tenn., later serving in the same capacity at New Orleans, La. In 1911 Mr. Young was made chief clerk on the Tennessee division and in 1917 he was appointed train auditor at Memphis. In the following year he became yardmaster at Fulton, Ky., and a short time later he was made trainmaster with the same headquarters. In 1920 Mr. Young was further advanced to superintendent at Fulton, being transferred to Carbondale, Ill., four years later. In 1926 he was promoted to superintendent of transportation, with headquarters at Chicago, which position he was holding at the time of his recent appointment as manager of personnel.

OBITUARY

J. H. Chown, superintendent of the Edmonton division of the Canadian Pacific, with headquarters at Edmonton, Alta., died on August 24.

John C. Dice, assistant vice-president of the Chesapeake & Ohio, with headquarters at Huntington, W. Va., died of heart disease on September 29 at his home in Lewisburg, W. Va. He was 63 years old. A photograph of Mr. Dice and a biographical sketch of his railway career was published in the *Railway Age* of September 14 in connection with his appointment as assistant vice-president.

Patrick J. Coleman, district manager, Car Service division, Association of American Railroads, at Minneapolis, Minn., died suddenly on September 26. Mr. Coleman was born on March 3, 1870, in Swinford, County Mayo, Ireland. He came to this country at the age of twelve years and soon thereafter entered railway service as a messenger and agent's helper on the Northern Pacific at Jamestown, N. D. Mr. Coleman served successively as a telegraph operator, station agent, train dispatcher, and chief train dispatcher. During the world war he was appointed acting superintendent of transportation of the Northern Pacific and later was made car service agent for the lines between Billings, Mont., and the Twin Cities. He was appointed district manager of the Car Service division, American Railway Association (now the Association of American Railroads), at Minneapolis, Minn., in November, 1922, and held this position until his death.

Frank N. Hibbits, consulting superintendent motive power for the Lehigh Valley, with headquarters at Bethlehem, Pa., died there on September 26, in Sacred Heart Hospital. Mr. Hibbits was born at Muncie, Ind., on February 3, 1866, and was graduated from Rose Polytechnic Institute, Terre Haute, Ind. He entered railway service in 1886 with the Cleveland, Columbus, Cincinnati & Indianapolis (now Cleveland, Cincinnati, Chicago & St. Louis), serving consecutively as machinist and draftsman until August, 1891. Mr. Hibbits served successively from August, 1891, to November, 1895, as engineer of tests, mechanical engineer, and master mechanic of the Rochester division, for the New York, Lake Erie & Western (now Erie). In November, 1895, he became freight trainmaster of the New York division of the Erie at Port Jervis, N. Y., and in June, 1899, superintendent of the Jefferson division at Carbondale, Pa. He was appointed mechanical engineer of the Union Pacific in May, 1901, and assistant superintendent motive power and machinery in March, 1903. From March to July, 1904, he was consulting mechanical engineer for the Southern, and from July, 1904, to May, 1906, he served as mechanical superintendent of the New York, New Haven & Hartford. Mr. Hibbits served as superintendent motive power for the Lehigh Valley at Bethlehem, Pa., from May, 1906, to February, 1929, when he became consulting superintendent motive power, with the same headquarters.